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ABSTRACT

The admissions policies of 47 colleges and universities were studied to consider the issue of racial and ethnic discrimination in undergraduate admissions. The Center for Equal Opportunity asked schools for data about students' application status, racial and ethnic group membership, verbal and mathematics Scholastic Assessment Test scores, and high school grade point average and class rank. Findings indicate that the average difference in academic credentials among those admitted--whether measured by test scores or grades and high school class rank, between blacks and whites, and to a lesser degree, between Hispanics and whites--is very large. There are few such differences between whites and Asians. Racial and ethnic preferences play a far more important role in admissions than has previously been acknowledged. Blacks have far greater probabilities of admission than do similarly qualified whites at a large variety of schools. Hispanics have substantially greater probabilities of admission than do whites, and Asians have similar probabilities of admission. All of these conclusions take into account both test scores and grades. Racial and ethnic preferences in admissions are pervasive and national in scope, and are not restricted to any region of the country. The more selective colleges and universities are more likely to use preferences for black applicants than are their less selective counterparts, but few colleges and universities use no preferences at all. Fewer schools have preferences for Hispanics, and only a handful have preferences for Asians. Appendixes contain the odds ratios for the analyses and the logistic regression equation estimating the probability of admission to eight schools. (Contains 19 tables, 15 figures, and 46 endnotes.) (SLD)

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PERVASIVE PREFERENCES

RACIAL AND ETHNIC DISCRIMINATION IN UNDERGRADUATE ADMISSIONS ACROSS THE NATION

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EMBARGOED UNTIL
FEBRUARY 22, 2001

Prepared for the
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Executive Summary

Our study of the admission policies of 47 colleges and universities across America yielded the following conclusions.

- The average difference in academic credentials among those admitted, whether measured by test scores or by grades and high-school class rank, between blacks and whites, and to a lesser extent between Hispanics and whites, is very large. There are few such differences between whites and Asians.

- Racial and ethnic preferences play a far more important role in admissions than has been previously acknowledged. Blacks have far greater probabilities of admission than do similarly qualified whites at a large variety of schools, Hispanics have substantially greater probabilities of admission than do whites, and Asians have similar probabilities of admissions. All of these conclusions take into account both test scores and grades. (We include both the complete logistic regression equations we used to predict admissions and new probability plots to explain further the effects of preferences on the probability of admission.)

- Racial and ethnic preferences in admissions are pervasive and national in scope. They are not restricted to any region of the country.

- The more selective colleges and universities are more likely to use preferences for black applicants than are their less selective counterparts, but few colleges and universities use *no* black-white preferences at all. Fewer schools have preferences for Hispanics and only a handful of schools have preferences for Asians or whites.

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Many individuals and groups helped us with this multistate report. We would like to thank the National Association of Scholars and their state chapters in North Carolina, Virginia, Michigan, and Minnesota, which helped us obtain the admission data from the various public colleges and universities that was disseminated in the individual state reports. We would also like to acknowledge the support and efforts of John Carlson and the Washington Institute Foundation in Washington; the Independence Institute, Tom Tancredo, and Charles King in Colorado; Robert B. Rosthal, the Pope Foundation, and John Hood and the John Locke Foundation in North Carolina; Michael Krauss in Virginia; William F. Meehan III and the Center of the American Experiment in Minnesota; and Richard Cutler and Carl Cohen in Michigan.

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Introduction

About fifteen years ago, in a series of articles in *Society* and elsewhere, sociologist William Beer lamented the dearth of empirical studies of racial preference programs and their consequences.[1] While there has been some improvement in this situation, the extent, operation, and consequences of racial and ethnic preferences in college and university admissions remain one of the nation's better kept secrets.[2]

The secrecy gap was highlighted in 1991, when law student and admissions-office worker Timothy J. McGuire revealed the existence of racial preferences in admissions at Georgetown University law school. His published information showed the large gap between black and white admittee LSAT scores. It raised serious questions about the admission policies that led to such disparities. McGuire's revelation created a huge uproar, a uniform denial by the administration that such preferences were used, and, of course, the threat of punishment for the miscreant, including the threat of expulsion and permanent exclusion from his chosen profession of the practice of law.[3]

There has been some grudging admission that preferences have been used in admission—or as William Bowen and Derek Bok put it, that admissions have been "racially sensitive."[4] Still, very little information has been disclosed to the public.[5] Thus, Justice Lewis Powell, in his famous *Bakke* opinion, cited only the Harvard College *catalogue* to justify using diversity as a criterion in admissions decisions. At no time did he have access to the data describing the actual admissions process at Harvard.[6]

This information gap has made it nearly impossible to grasp the extent of racial and ethnic preference policies and to evaluate conclusively various defenses of these policies, to which university administrators routinely resort. The first defense is that all who are accepted are "qualified." The second defense is that is that race/ethnicity is only "one of many factors" that are used in admission decisions. The third defense is that racial differences in admission rates and the like are due to the operation of other factors, including preference for in-state residents and children of alumni.[7] The fourth defense is that racial preferences are used extensively at only a few of America's leading colleges and universities.[8] The fifth defense college and university administrators use, without always saying so explicitly, is that we have the data and you don't, so you don't really understand what is going on.[9]

This last reason is itself very important. It has been impossible until recently to test empirically any of these defenses because America's colleges and universities have made data from their admission files that would permit objective evaluation of their claims impossible for outsiders to obtain. To put it bluntly, despite their ostensibly being institutions devoted to the growth and dissemination of knowledge, including knowledge about higher educational institutions, America's colleges and universities have furiously resisted scrutiny of their admissions policies that would lead to increased public knowledge of whether or how racial and ethnic preferences at institutions of higher learning operate, and to what effect.

The end result is that college and university administrators are able to and do routinely make false and misleading arguments about their admission policies. They could be confident that no one would call them to account. Until now.

Our monograph provides for the first time detailed, quantitative evidence supporting our contention that racial and ethnic preferences in admission to America's colleges and universities are both extremely large and widespread. We will be able to see the extensive use of preferences favoring blacks and Hispanics over whites and Asians, as reflected in consistent gaps in qualifications, across state systems, among the less as well as the most competitive schools in the nation.

To do this, we compile all the data obtained under state freedom-of-information laws by the Center for Equal Opportunity (CEO) and published in our earlier studies. These studies have examined the extent of racial and ethnic preferences in admissions at the public colleges and universities of Colorado, Michigan, Minnesota, North Carolina, and Virginia, as well as the U.S. Military Academy and the U.S. Naval Academy, the University of Washington and Washington State University, and branch campuses of the University of California at Berkeley, Irvine, and San Diego.[10]

Our monograph combines much of the data from the earlier studies into one analysis. It allows us to evaluate the validity of the above arguments put forth by college and university administrators. We conclude:

- The average difference in academic qualifications, whether measured by test scores or by grades and high-school class rank, between blacks and whites and between Hispanics and whites is very large.
- Racial preferences play a far more important role in admissions than has been previously acknowledged. We include both the complete logistic regression equations we used to predict admissions and new probability plots to explain further the effects of preferences on the probability of admission. Blacks have far greater probabilities of admission than do whites at a large variety of schools, Hispanics have substantially greater probabilities of admission than do whites, and Asians have similar probabilities of admissions. All of these conclusions take into account both test scores and grades.
- Residency requirements and alumni requirements do not explain away differences in the probability of admissions among the racial and ethnic groups. In fact, data from the University of Virginia (discussed below) provides evidence that there is a bidding war for African-American applicants across state lines.
- Racial and ethnic preferences in admissions are pervasive and national in scope. They are not restricted to any region of the country.
- The more selective colleges and universities are more likely to use preferences than are their less selective counterparts, but only a handful of colleges and universities use *no* preferences at all.

Methodology

Table 1 lists the colleges and universities[11] that were required to supply data for the CEO project.[12] Although these schools are not a random sample of America's colleges and universities, they do represent a cross-section of the nation's four-year institutions of public higher education.

Our study includes 3 schools from California, 12 from Colorado, 8 from Michigan, 4 from Minnesota, 6 from North Carolina, 2 of the U.S. service academies, 10 from Virginia, and 2 from Washington state—for a total of 47 schools.

I. Rating the Schools

We rank the schools according to *Barron's Profiles of American Colleges*. Eight are ranked as "most competitive" or "highly competitive," 12 are "very competitive," 18 are "competitive," and 9 are "less competitive" or "non-competitive" (see Table 1).

Table 1
Rating of Schools by *Barron's Profiles of American Colleges*

School	*State*	*Rating*
University of California, Berkeley	CA	Most Competitive
University of California, Irvine	CA	Competitive
University of California, San Diego	CA	Very Competitive
Adams State College, Colorado	CO	Competitive
Colorado School of Mines	CO	Highly Competitive
Colorado State University	CO	Very Competitive
Fort Lewis College, Colorado	CO	Less Competitive
Mesa State University, Colorado	CO	Less Competitive
Metropolitan State University, Colorado	CO	Less Competitive
Northern Colorado University	CO	Competitive
Southern Colorado University	CO	Competitive
University of Colorado, Boulder	CO	Very Competitive
University of Colorado, Colorado Springs	CO	Competitive
University of Colorado, Denver	CO	Very Competitive
Western State College, Colorado	CO	Non-Competitive
Central Michigan University	MI	Competitive
Ferris State University, Michigan	MI	Non-Competitive
Michigan State University	MI	Competitive
Michigan Technical University	MI	Very Competitive
Northern Michigan University	MI	Competitive
Saginaw Valley State University, Michigan	MI	Less Competitive
University of Michigan, Dearborn	MI	Very Competitive
University of Michigan, Ann Arbor	MI	Highly Competitive
University of Minnesota, Crookston	MN	Non-Competitive
University of Minnesota, Duluth	MN	Competitive
University of Minnesota, Morris	MN	Very Competitive
University of Minnesota, Twin Cities	MN	Very Competitive
North Carolina State	NC	Very Competitive
University of North Carolina, Asheville	NC	Very Competitive

Table 1 (continued)

University of North Carolina, Chapel Hill	NC	Highly Competitive
University of North Carolina, Charlotte	NC	Competitive
University of North Carolina, Greensboro	NC	Less Competitive
University of North Carolina, Wilmington	NC	Competitive
U.S. Naval Academy	US	Most Competitive
U.S. Military Academy	US	Most Competitive
College of William & Mary, Virginia	VA	Most Competitive
George Mason University, Virginia	VA	Competitive
James Madison University, Virginia	VA	Very Competitive
Longwood College, Virginia	VA	Competitive
Norfolk State University, Virginia	VA	Less Competitive
Old Dominion University, Virginia	VA	Competitive
University of Virginia	VA	Most Competitive
Virginia Commonwealth University	VA	Competitive
Virginia Military Institute	VA	Competitive
Virginia Polytechnic Institute and State University	VA	Competitive
University of Washington	WA	Very Competitive
Washington State University	WA	Competitive

II. Type of Data Obtained by CEO

Table 2 summarizes the information CEO received from the 47 schools. CEO sought, in particular, data regarding students' application status (i.e., admission, rejection, and/or enrollment), racial or ethnic group membership, verbal and math SAT scores or composite ACT scores, and high-school grade point average (GPA) or high-school class rank. Five schools provided data only on individual *enrollees*, including their racial or ethnic group membership, verbal and math SAT scores (or ACT) scores, and high-school GPA or high-school class rank. In one case (Northern Michigan University), data were obtained only on enrollees' GPAs. None of these five schools provided data for applicants who were *rejected* and those who were *accepted but did not enroll*.

While much can be learned from data on enrollees, enrollee data are not as good as admittee data. We cannot know the academic qualifications of those who were admitted but chose not to attend. In turn, admittee data are not as good as complete applicant data, which includes information on rejectees, those admitted but not enrolled, and enrollees. Such data files allow us to make comparisons between rejectees and admittees (i.e., enrollees plus those admitted who chose not to attend). With complete applicant data, we are able to estimate the probabilities of admission for various racial and ethnic groups, controlling for academic qualifications and other factors.

Forty-one schools provided data on enrollees, nonenrolled admittees, and rejectees. Twenty-eight schools provided data where the applicants' grades and test scores were linked to the same data record, so that logistic regression equations could be computed and the resulting probabilities of admission displayed graphically. Despite our explicit request to do so, 19 schools did not link applicant grades and test scores on the same data records, making this kind of analysis impossible.[13]

We omit from our data analyses those cases for which race/ethnicity is listed as "other," "missing," or "unknown." We also omit Native Americans because of their

relatively small numbers in this context. Lastly, we omit cases with missing test score or grade data.

We do not report group means for test scores, GPAs, or class rank. Using group means can place greater weight on extreme values than is warranted. A few unusually high or low scores can have a substantial effect on the value of the mean. Standard deviations, which are based on squared deviations from the mean, are even more problematic in describing the spread of cases for asymmetrical, badly skewed distributions. This is because standard deviations reflect the mathematical square of these extreme values.

The median, however, and related (order) statistics are far less affected by the values of extreme cases. The median represents the middle of a distribution so that 50 percent of all students have higher scores, and 50 percent have lower scores.

Because some schools provided only enrollee data, while others provided complete applicant data; because some use SATs and others, ACTs; because some use GPAs and others use high-school rank; and because some schools provided only summary statistics or separate data files for test scores and grades, we will rely on a statistical technique (the binomial one-sample test) which allows us to deal with the problems presented in combining many data sets with somewhat different variables.[14]

Table 2
Type of Data Provided by Schools

School	Fall Term	Student Type	Link Grades & Tests
University of California, Berkeley	1995	Enrollees	Yes
University of California, Irvine	1995	Enrollees	Yes
University of California, San Diego	1995	Enrollees	Yes
Adams State College, Colorado	1995	All	No
Colorado School of Mines	1995	All	No
Colorado State University	1995	All	No
Fort Lewis College, Colorado	1995	All	No
Mesa State University, Colorado	1995	All	No
Metropolitan State University, Colorado	1995	All	No
Northern Colorado University	1995	All	No
Southern Colorado University	1995	All	No
University of Colorado, Boulder	1995	All	No
University of Colorado, Colorado Springs	1995	All	No
University of Colorado, Denver	1995	All	No
Western State University, Colorado	1995	All	No
Central Michigan University	1995	Enrollees	No
Ferris State University, Michigan	1995	All	Yes
Michigan State University	1995	All	No
Michigan Technical University	1995	All	No
Northern Michigan University	1995	Enrollees	No
Saginaw Valley State University, Michigan	1995	Enrollees	No
University of Michigan, Ann Arbor	1995	All	Yes
University of Michigan, Dearborn	1995	All	Yes
University of Minnesota, Crookston	1997	All	Yes
University of Minnesota, Duluth	1997	All	Yes
University of Minnesota, Morris	1997	All	Yes
University of Minnesota, Twin Cities	1997	All	Yes
North Carolina State	1995	All	Yes
University of North Carolina, Asheville	1995	All	Yes
University of North Carolina, Chapel Hill	1995	All	Yes
University of North Carolina, Charlotte	1995	All	Yes
University of North Carolina, Greensboro	1995	All	Yes
University of North Carolina, Wilmington	1995	All	Yes
U.S. Naval Academy	1995	All	Yes
U.S. Military Academy	1995	All	Yes
College of William & Mary, Virginia	1996	All	Yes
George Mason University, Virginia	1996	All	Yes
James Madison University, Virginia	1996	All	Yes
Longwood College, Virginia	1996	All	Yes
Norfolk State University, Virginia	1996	All	Yes
Old Dominion University, Virginia	1996	All	Yes
University of Virginia	1996	All	Yes
Virginia Commonwealth University	1996	All	Yes
Virginia Military Institute	1996	All	Yes
Virginia Polytechnic Institute and State University	1996	All	Yes
University of Washington	1995	All	No
Washington State University	1995	All	No

III. Using the Binomial One-Sample Test in Assessing Schools

We counted the number of schools where the white median score exceeded the black median score versus where the black median was equal to or exceeded the white median, where the white median exceeded the Hispanic median versus where the Hispanic median was equal to or exceeded the white median, and where the white median exceeded the Asian median versus where the Asian median was equal to or exceeded the white median. This was done for test scores and for grades.

Having established these ratios, we then performed binomial one-sample tests on these ratios. The binomial one-sample test can help in determining whether the number of differences is likely to be due to chance or not. It is akin to knowing what the likelihood would be of getting a certain number of heads in a row when flipping an unweighted coin. If the coin is equally weighted, the number of heads should be approximately equal to the number of tails in the long run. If it is a weighted coin, the ratio of the number of heads to the number of tails can be expected to diverge sharply from the expected 50/50 ratio. For example, if we had 50 schools where the white median exceeded the black median, and 10 schools where the black median exceeded the white median, the probability that the 50-to-10 ratio is due to chance is less than 1 out of 10,000 chances.

The binomial one-sample test still allows us to use group median scores and grades, rather than group mean scores and grades. As stated previously, we use the median rather than the mean to reduce the effect of a few unusually high or low scores that skew the mean in one direction or the other.

Racial and Ethnic Differences in Admissions

I. Raw Admission Rates

Table 3 shows the raw admission rates at forty-one schools based on data provided by each school for all black, Hispanic, white, and Asian applicants. The schools are listed in ascending order of black admission rates.[15]

At twenty-nine schools, the white admission rate is greater than the black rate. At two schools (the University of Colorado at Boulder and the University of Minnesota at Crookston), they are the same. Blacks have a higher admission rate at nine schools (Southern Colorado, the University of North Carolina at Asheville, North Carolina State, the University of North Carolina at Chapel Hill, the University of North Carolina at Wilmington, the University of Michigan at Ann Arbor, the University of Washington, Longwood College in Virginia, the University of Virginia, and Virginia's William & Mary).

Whites are admitted at a higher rate than are Hispanics at twenty-nine schools. They are admitted at the same rate at one (the University of Minnesota at Crookston), while Hispanics have higher admission rates than whites at eleven schools (Adams State College of Colorado, the University of Colorado at Boulder, the University of Minnesota at Twin Cities, the U.S. Naval Academy, the University of North Carolina at Asheville, Virginia's George Mason University, Longwood College, and William & Mary, the University of Washington, Michigan State University, and the University of Michigan at Ann Arbor).

Asians are admitted at a higher rate than whites at twenty-one schools. At two schools, they are admitted at the same rate, while whites have higher admission rates at eighteen schools.

These admission rates, however, are raw rates. That is, these rates are not adjusted (i.e., statistically controlled) for the influence of test scores and grades. When there is a gap in test scores or grades—for example, where minority groups have significantly lower scores compared to whites—statistical adjustment is necessary to uncover the adjusted or true admission rates. With the proper statistical controls, we can better uncover the probability of admission for different groups, and thus give a more accurate portrayal of racial and ethnic preferences in admissions at individual schools.

Table 3
Admission Rates for Different Groups

School	*Black*	*Hispanic*	*Asian*	*White*
U.S. Military Academy	10%	11%	16%	14%
U.S. Naval Academy	11%	20%	13%	15%
University of Virginia	48%	21%	27%	25%
James Madison University, Virginia	55%	58%	61%	64%
Fort Lewis College, Colorado	57%	76%	84%	82%
Virginia Tech	60%	73%	80%	85%
Western State, Colorado	61%	71%	78%	72%
Northern Colorado	63%	75%	85%	83%
Old Dominion University, Virginia	63%	73%	85%	87%
Virginia Military Institute	64%	62%	43%	82%
University of North Carolina, Wilmington	65%	40%	54%	56%
University of Colorado, Colorado Springs	66%	74%	81%	83%
University of Colorado, Denver	68%	78%	77%	82%
University of North Carolina, Asheville	69%	75%	67%	66%
University of North Carolina, Chapel Hill	69%	31%	52%	62%
Virginia Commonwealth University	69%	84%	89%	87%
George Mason University, Virginia	70%	83%	75%	71%
University of North Carolina, Charlotte	70%	67%	71%	76%
William & Mary, Virginia	70%	47%	49%	44%
Colorado School of Mines	71%	74%	82%	81%
Mesa State, Colorado	73%	88%	83%	89%
Colorado State	74%	59%	80%	76%
University of Colorado, Boulder	75%	86%	89%	75%
North Carolina State	76%	56%	71%	72%
University of Michigan, Dearborn	76%	82%	92%	87%
Washington State University	76%	90%	88%	92%
Adams State College, Colorado	80%	97%	100%	96%
University of North Carolina, Greensboro	80%	89%	87%	92%
University of Minnesota, Twin Cities	81%	90%	94%	84%
Longwood College, Virginia	82%	79%	62%	74%
Michigan State University	82%	94%	94%	91%
University of Michigan, Ann Arbor	82%	91%	74%	73%
Metropolitan State, Colorado	84%	86%	84%	94%
University of Minnesota, Duluth	84%	86%	92%	88%
University of Minnesota, Morris	89%	92%	92%	98%
Ferris State, Michigan	92%	97%	100%	98%
Michigan Technical University	92%	92%	96%	95%
Norfolk State, Virginia	95%	89%	92%	98%
University of Washington	97%	90%	78%	74%
Southern Colorado	100%	97%	100%	99%
University of Minnesota, Crookston	100%	100%	100%	100%

II. Overall Group Comparisons

In the tables and discussion below, we summarize our findings from earlier CEO studies. For some schools, we compare test scores and grades among admittees. For other schools, we deal with data on enrollees. Regardless of whether the data are for enrollees or admittees, the general findings are roughly the same. There are persistent gaps in test scores and grades between white and black admittees and enrollees and, to a lesser extent, between white and Hispanic admittees and enrollees. The differences between white and Asian admittees and enrollees are mixed.[16]

One way evidence of preferences can be found is by comparing average test scores and grades of admittees and enrollees by race and ethnicity. This procedure helps measure the extent of preference granted to a particular class of applicants by a college or university. The evidence need not be conclusive, however, because there are large differences in test scores and grades (especially test scores) between, for instance, blacks and whites in the general population. Presumably, the different applicant pools will yield at least some black-white differences in admittee qualifications even under race-neutral conditions.

Nevertheless, the size of the black-white difference in test scores is a useful if imperfect indicator of the extent of racial preferences. The larger the difference is, the more likely that there is racial or ethnic preference in admissions and the larger the amount of such preference is likely to be for the favored group. The term "racial preference" means admitting individuals of the "right" skin color with lower grades and test scores over those with higher test scores and grades but with the "wrong" skin color.[17] Using racial preferences in admissions will lower the average test score and GPAs of black admittees or enrollees relative to white admittees or enrollees. This will thus increase the difference between the black and white averages over what would have been the case if race was not a criterion in admissions. The greater the degree of preference afforded to blacks, the greater the black-white difference in average scores will be, because it will require admitting those in the applicant pool with progressively weaker qualifications. When racial preferences are removed, the differences in test scores and grades will decline very substantially, even if they do not vanish totally.

This discussion raises the question of how large a difference in mean or median scores is required in order to provide strong evidence of preferential treatment (that is, discrimination). This problem exists for all statistical studies of discrimination. The answer is to some extent arbitrary, but it is useful to establish some kind of threshold values for inferring the existence of preferences when examining average differences between admittees of different racial or ethnic groups.

We do not assume that every racial or ethnic difference in median test scores and grades is the result of racial or ethnic preference. Nor in fact do we conclude that every school studied shows preferences whenever such differences exist. In fact, we generally assume that if the difference is less than 30 points on either of the SATs, and less than 0.1 of a grade point on high-school grades, the school's admissions policy likely does not use racial or ethnic preferences. In order to infer the operation of such preferences, we generally assume that all three indicators of academic merit must exhibit differences greater than the above size.[18]

A. Whites Compared with Blacks

1. Verbal SAT Scores

There were twenty-seven schools where we could compare median verbal SAT scores for white and black admittees or white and black enrollees. At *all* twenty-seven schools, the white median was greater than the black median[19] (see Table 4).

Table 4
White-Black Gaps, Verbal SAT Scores

School	*White*	*Black*	*White-Black Gap*
University of California, Berkeley	600	450	150
University of Michigan, Ann Arbor	580	480	100
William & Mary, Virginia	680	580	100
University of California, Irvine	490	395	95
Michigan Technical University	565	470	95
University of Michigan, Dearborn	490	400	90
University of North Carolina, Chapel Hill	570	480	90
University of Virginia	690	600	90
North Carolina State	510	430	80
University of North Carolina, Asheville	580	500	80
James Madison University, Virginia	600	520	80
Virginia Military Institute	560	480	80
University of Washington	500	420	80
University of North Carolina, Wilmington	460	390	70
U.S. Naval Academy	580	510	70
Washington State	430	360	70
University of California, San Diego	550	490	60
Michigan State University	490	430	60
University of North Carolina, Charlotte	460	400	60
Virginia Commonwealth University	540	480	60
Virginia Tech	580	520	60
University of North Carolina, Greensboro	450	400	50
George Mason University, Virginia	540	490	50
U.S. Military Academy	550	510	40
Longwood College, Virginia	520	480	40
Norfolk State, Virginia	440	410	30
Old Dominion University, Virginia	520	490	30

Gaps in median verbal SATs range from a low of 30 points at Virginia's Old Dominion and Norfolk State, to a high of 150 at the University of California at Berkeley and 100 points both at the University of Michigan at Ann Arbor and at William & Mary in Virginia.

The most competitive schools (like the University of California at Berkeley, the University of Michigan at Ann Arbor, and Virginia's William & Mary) generally have the largest gaps between whites and blacks.[20] Other highly rated schools—such as the University of Virginia (rated "most competitive" by *Barron's*) and the University of North Carolina at Chapel Hill (rated "highly competitive")—also have extremely large gaps (90 points). The schools with verbal SAT gaps of 90 or more points are from across the country: California and Michigan, as well as the two southern states in our study.

In contrast, the least competitive schools (such as Virginia's Old Dominion, Norfolk State, and Longwood) generally have the smallest gaps, although they are not insignificant (30 or 40 points).

2. Math SAT Scores

As with verbal SAT scores, there were twenty-seven schools where the we could compare white and black admittee or enrollee median math SAT scores (see Table 5).

Table 5
White-Black Gaps, Math SAT Scores

School	*White*	*Black*	*White-Black Gap*
University of California, Berkeley	690	510	180
University of Michigan, Dearborn	570	430	140
University of Washington	590	450	140
University of Michigan, Ann Arbor	670	540	130
Michigan State University	570	450	120
James Madison University, Virginia	610	500	110
Michigan Technical University	640	530	110
North Carolina State	590	480	110
Washington State	490	380	110
William & Mary, Virginia	660	550	110
University of California, Irvine	580	475	105
University of California, San Diego	640	540	100
University of North Carolina, Chapel Hill	630	530	100
University of North Carolina, Charlotte	520	420	100
University of North Carolina, Wilmington	520	420	100
University of Virginia	690	600	90
U.S. Naval Academy	670	590	80
University of North Carolina, Greensboro	490	410	80
Virginia Tech	600	520	80
George Mason University, Virginia	530	460	70
University of North Carolina, Asheville	560	490	70
Virginia Military Institute	570	505	65
U.S. Military Academy	650	590	60
Virginia Commonwealth University	510	450	60
Longwood College, Virginia	510	455	55
Old Dominion University, Virginia	520	470	50
Norfolk State, Virginia	430	390	40

At all twenty-seven schools, the white median was greater than the black median. White-black gaps are even greater for median math SATs than they are for verbal SAT scores.The white-black gaps in math SATs range from 180 points at UC Berkeley to 40 points at Norfolk State University in Virginia.

As with verbal SATs, the smallest gaps are at the less competitive schools, although the gaps are substantial everywhere. The schools with the smallest gaps are overwhelmingly southern. The gap between whites and blacks at Virginia's Norfolk State is 40 points, at Old Dominion University of Virginia, 50 points, at Virginia's Longwood College, 55 points, and at Virginia Commonwealth University, 60 points.

The largest gap is at UC Berkeley (180 points), followed by UM Dearborn, the University of Washington, and UM Ann Arbor. At sixteen of the twenty-seven schools, the math SAT gap is 100 points or greater. Merely "competitive" schools have gaps as large or larger than the more competitive schools. For example, Michigan State and Michigan Technical University have gaps of 130 and 120 points respectively, while the gap at the University of Virginia is 90 points, and 100 points at the University of North Carolina, Chapel Hill. The five schools with the largest gaps are not southern schools, but a mix of those in the Midwest and the West Coast.

3. ACT Scores

There were twenty-two schools where we could compare median ACT scores of black and white admittees or enrollees. The white medians were greater than the black medians at all twenty-two schools (see Table 6).

Table 6
White-Black Gaps, ACT Scores

School	*White*	*Black*	*White–Black Gap*
University of Minnesota, Morris	25	18	7
Michigan Technical University	26	20	6
University of Michigan, Ann Arbor	29	23	6
Colorado School of Mines	27	22	5
University of Michigan, Dearborn	24	19	5
University of Minnesota, Twin Cities	25	20	5
Central Michigan University	22	18	4
University of Colorado, Boulder	25	21	4
University of Colorado, Denver	24	20	4
Ferris State, Michigan	19	15	4
Michigan State University	24	20	4
Northern Colorado	22	18	4
University of Minnesota, Duluth	23	19	4
Colorado State	24	21	3
University of Colorado, Colorado Springs	23	20	3
Metropolitan State, Colorado	20	17	3
Western State, Colorado	20	17	3
Southern Colorado	20	18	2
Adams State, Colorado	20	18	2
Mesa State, Colorado	20	18	2

Saginaw Valley State, Michigan	20	18	2
University of Minnesota, Crookston	19	18	1

The size of the gaps seems to parallel the competitiveness of the school. More competitive schools have larger ACT gaps between whites and blacks. The largest gaps are at the University of Minnesota, Morris (7 points, or the equivalent of roughly 280 combined SAT points), the University of Michigan at Ann Arbor (6 points, or roughly 240 combined SAT points), and Michigan Technical University (also 6 points). Schools that are "less competitive" and "non-competitive" tend to have smaller ACT gaps compared to the more competitive schools.

The smallest gaps between whites and blacks are 1 point at the University of Minnesota at Crookston and 2 points at Michigan's Saginaw Valley State, Southern Colorado, and Colorado's Mesa State and Adams State. Since 1 point on the ACT is roughly equivalent to 40 points on the combined SAT, these differences are modest but not negligible.

4. High-School Grades, Percentiles, and Class Rank

We have data on high-school grade point averages (GPAs), class ranks, or percentiles for forty-five schools. (Only Virginia's William & Mary and the Virginia Military Institute provided neither high-school GPAs, percentiles, nor class rank.[21]) There were eight schools reporting high-school percentiles or rank, and thirty-seven schools reporting GPAs. For West Point and Annapolis, high-school *rank* is reported in the opposite manner compared to the way in which *percentile* is reported for the civilian schools. Thus, a rank of "1" means finishing first in one's high-school class (versus finishing in the 99th percentile for the civilian schools).

Thirty-seven schools reported GPAs. For all thirty-seven, the median GPA for whites is greater than that for blacks. The white-black differences in average GPAs are moderate in size. All differences are less than a full grade point. Rather surprisingly, the largest gap is at Colorado's Mesa State, a "less competitive" college. The white median GPA there exceeds the black median GPA by 0.65. This is followed by the University of California at Berkeley, rated "most competitive" (0.58); Colorado's Adams State College, rated "competitive" (0.55); and the University of Washington, rated "very competitive" (0.47). The gap between whites and blacks at the Colorado School of Mines, rated "highly competitive," is the same as that between whites and blacks at the "less competitive" Saginaw Valley State in Michigan (0.45 for both schools).

Eight schools provided either high-school percentiles or class rank. The University of Minnesota at Morris was the only school where the black admittees' median high-school percentile (91st percentile) was higher than that of the median for white admittees (88th

percentile). At the other seven, whites finished higher in class standing than did their black counterparts (see Table 7).

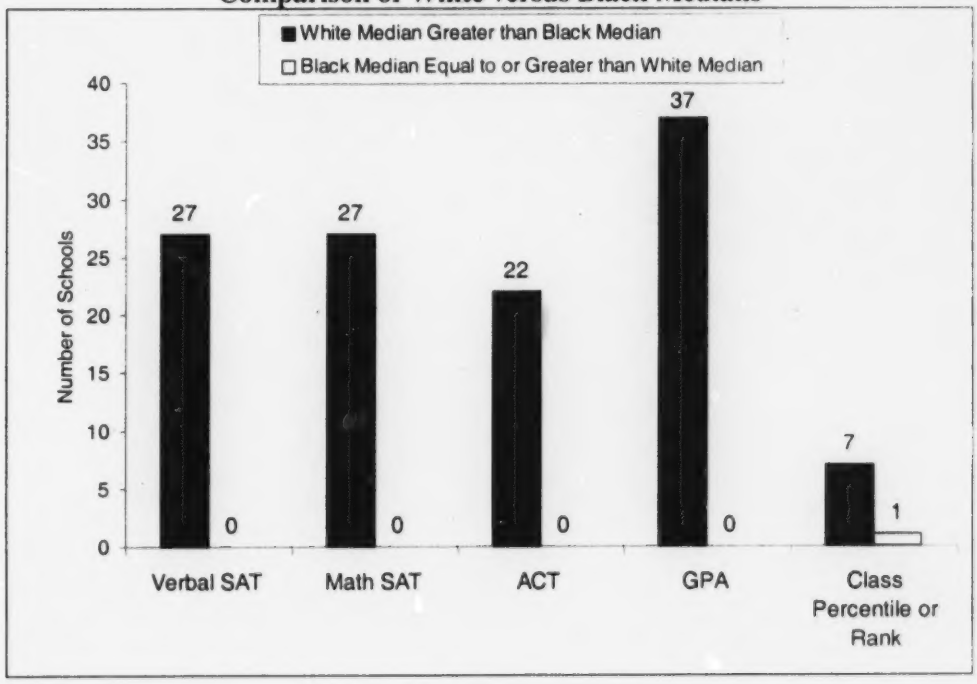
Table 7
White-Black Gap: Grades, Percentiles, and Class Rank

School	Grade Type	White	Black	White-Black Gap
Mesa State, Colorado	GPA	2.90	2.25	0.65
University of California, Berkeley	GPA	4.00	3.42	0.58
Adams State, Colorado	GPA	3.10	2.55	0.55
University of Washington	GPA	3.68	3.21	0.47
Saginaw Valley, Michigan	GPA	2.84	2.39	0.45
Colorado School of Mines	GPA	3.80	3.35	0.45
University of North Carolina, Wilmington	GPA	3.40	2.95	0.45
Central Michigan University	GPA	3.20	2.76	0.44
Northern Michigan University	GPA	3.20	2.76	0.44
University of Michigan, Ann Arbor	GPA	3.70	3.30	0.40
Colorado State	GPA	3.40	3.00	0.40
University of Colorado, Boulder	GPA	3.30	2.90	0.40
Fort Lewis College, Colorado	GPA	2.90	2.50	0.40
Southern Colorado	GPA	3.00	2.60	0.40
University of North Carolina, Chapel Hill	GPA	3.99	3.60	0.39
North Carolina State	GPA	3.65	3.27	0.38
Washington State	GPA	3.32	2.95	0.37
University of Colorado, Colorado Springs	GPA	3.10	2.80	0.30
Michigan Technical University	GPA	3.48	3.20	0.28
University of North Carolina, Charlotte	GPA	3.38	3.10	0.28
Michigan State University	GPA	3.43	3.16	0.27
Ferris State, Michigan	GPA	2.70	2.45	0.25
University of California, Irvine	GPA	3.64	3.39	0.25
Northern Colorado	GPA	3.10	2.90	0.20
University of Colorado, Denver	GPA	3.30	3.10	0.20
Metropolitan State, Colorado	GPA	2.90	2.70	0.20
University of Michigan, Dearborn	GPA	3.40	3.20	0.20
Western State, Colorado	GPA	2.80	2.60	0.20
University of North Carolina, Asheville	GPA	3.54	3.36	0.18
Longwood College, Virginia	GPA	3.03	2.85	0.18
George Mason University, Virginia	GPA	3.08	2.93	0.15
Virginia Tech	GPA	3.44	3.30	0.14
Norfolk State, Virginia	GPA	2.40	2.30	0.10
Virginia Commonwealth University	GPA	3.00	2.91	0.09
Old Dominion University, Virginia	GPA	2.95	2.90	0.05
University of California, San Diego	GPA	3.92	3.88	0.04
University of North Carolina, Greensboro	GPA	3.14	3.10	0.04
U.S. Naval Academy	Class Rank from Top	15th	36th	21.00
University of Minnesota, Crookston	Percentile	50.0	29.0	21.00
University of Minnesota, Twin Cities	Percentile	82.0	73.0	9.00
University of Virginia	Percentile	97.3	91.8	5.45
James Madison University, Virginia	Percentile	85.0	80.0	5.00
U.S. Military Academy	Class Rank from Top	14th	18th	4.00
University of Minnesota, Duluth	Percentile	74.0	71.5	2.50
University of Minnesota, Morris	Percentile	88.0	91.0	-3.00

5. General Assessment: White versus Black Medians

Figure 1 shows the differences in white-black admittee and enrollee medians for all criteria (SAT verbal, SAT math, ACT, GPA, and class rank) used to evaluate white and black admittees and enrollees. In total, there are twenty-seven verbal SAT comparisons, twenty-seven math SAT comparisons, twenty-two ACT comparisons, thirty-seven GPA comparisons, and eight class-rank comparisons. In every set of comparisons, the white admittee or enrollee median is greater than the black admittee or enrollee median, except for one case. At the same time, there are several schools with quite small black-white differences that may indicate that there is little or no preference present there. This will be discussed further in Part IV.

Figure 1
Comparison of White versus Black Medians



B. Whites Compared with Hispanics

1. Verbal SAT Scores

Twenty-six schools reported verbal SAT scores for Hispanics. The range of admittee and enrollee differences in white-Hispanic median verbal SATs is not as large as the white-black gap in verbal SATs, and the average median difference is considerably smaller but still substantial (see Table 8). Gaps between white and Hispanic admittees and enrollees in median SAT range from a high of 120 points (at UC Berkeley), to -30 (favoring Hispanics over whites) at UNC Wilmington and at Michigan State University.

Table 8
White-Hispanic Gaps, Verbal SAT Scores

School	*White*	*Hispanic*	*White-Hispanic Gap*
University of California, Berkeley	600	480	120
U.S. Naval Academy	580	490	90
University of California, Irvine	490	410	80
University of California, San Diego	550	470	80
University of North Carolina, Asheville	580	510	70
University of Michigan, Ann Arbor	580	520	60
Washington State	430	390	40
William & Mary, Virginia	680	640	40
George Mason University, Virginia	540	510	30
University of Washington	500	470	30
Virginia Commonwealth University	540	510	30
Longwood College, Virginia	520	500	20
U.S. Military Academy	550	530	20
University of Virginia	690	670	20
Virginia Tech	580	560	20
Norfolk State, Virginia	440	430	10
University of North Carolina, Charlotte	460	450	10
University of North Carolina, Greensboro	450	440	10
North Carolina State	510	505	5
James Madison University, Virginia	600	600	0
Old Dominion University, Virginia	520	520	0
Virginia Military Institute	560	560	0
Michigan Technical University	565	570	-5
University of North Carolina, Chapel Hill	570	590	-20
Michigan State University	490	520	-30
University of North Carolina, Wilmington	460	490	-30

Regionally, the California schools are three of the five schools with the largest gap between whites and Hispanics. Next to UC Berkeley, UC Irvine and UC San Diego have the largest gaps among civilian schools between whites and Hispanics (both 80 points). Only the U.S. Naval Academy has a larger gap (90 points). UNC Asheville also has a substantial gap (70 points), as does UM Ann Arbor (60 points).

At five schools (Virginia's William & Mary, Washington State University, George Mason University of Virginia, Virginia Commonwealth University, and the University of Washington), the gaps are smaller but still substantial. White admittees and enrollees on average have a 40-point higher verbal SAT than Hispanics at William & Mary and at Washington State. At George Mason, Virginia Commonwealth University, and the

University of Washington, whites on average outscored Hispanics on the verbal SAT by 30 points.

Whites on average have only modestly higher scores than Hispanics at eight schools (the U.S. Military Academy; Virginia's Longwood, Norfolk State, Virginia Tech, and University of Virginia; and UNC Charlotte, UNC Greensboro, and North Carolina State). There was a 20-point gap between whites and Hispanics at the U.S. Military Academy, Longwood College of Virginia, Virginia Tech, and the University of Virginia. At UNC Charlotte, UNC Greensboro, and Virginia's Norfolk State, the gap is 10 points, while it is 5 points at North Carolina State.

At Virginia's Old Dominion University, Virginia Military Institute, and James Madison University, there is no difference in median verbal SATs between whites and Hispanics.

Finally, Hispanics outscore whites on the verbal SAT at four schools. The Hispanic-white gap favoring Hispanics is 30 points at UNC Wilmington and Michigan State. The Hispanic-white gap favoring Hispanics is slightly smaller (20 points) at UNC Chapel Hill, and the gap favoring Hispanics is only 5 points at Michigan Technical University.

Tallying the number of schools where the white median exceeds the Hispanic median on SAT verbal scores, and where the Hispanic median is equal to or greater than the white one, we find 19 of the former and 7 of the latter. To see if the ratio of 19 to 7 is statistically significant, we used the binomial one-sample test. The calculated *p*-value of a ratio of 19 to 7 is 0.0145. Statistically, this means that there is less than a 2 out of 100 chance that the findings are random. Accordingly, our ratio is statistically significant, showing overall that there is a nonrandom difference between white and Hispanic admittees and enrollees.

2. Math SAT Scores

There were twenty-six schools reporting white and Hispanic scores on the math SAT (see Table 9). For all but one, the white medians are higher and, at the remaining school, the medians are the same.

Table 9
White-Hispanic Gaps, Math SAT Scores

School	*White*	*Hispanic*	*White-Hispanic Gap*
University of California, Berkeley	690	560	130
University of California, Irvine	580	480	100
University of California, San Diego	640	550	90
University of Michigan, Ann Arbor	670	600	70
University of Washington	590	520	70
Michigan State University	570	510	60
U.S. Naval Academy	670	625	45
Michigan Technical University	640	600	40
University of Virginia	690	660	30
Washington State	490	465	25
William & Mary, Virginia	660	635	25
George Mason University, Virginia	530	510	20
James Madison University, Virginia	610	590	20
North Carolina State	590	570	20
Old Dominion University, Virginia	520	500	20
Virginia Commonwealth University	510	490	20
Virginia Tech	600	580	20
Norfolk State, Virginia	430	415	15
University of North Carolina, Asheville	560	545	15
Longwood College, Virginia	510	500	10
University of North Carolina, Chapel Hill	630	620	10
University of North Carolina, Greensboro	490	480	10
University of North Carolina, Wilmington	520	510	10
U.S. Military Academy	650	640	10
Virginia Military Institute	570	560	10
University of North Carolina, Charlotte	520	520	0

Six schools exhibit extremely large gaps, where the white median exceeds the Hispanic median by 60 or more points. The University of California at Berkeley has a white-Hispanic math gap of 130 points, the largest gap of the schools. The second and third largest gaps are also California schools. On average, whites at UC Irvine outscore Hispanics by 100 points, while at UC San Diego the difference is 90 points. At UM Ann Arbor and the University of Washington, the gap between the median white and Hispanic scores is 70 points, and it is 60 points at Michigan State.

At nineteen schools, there are more modest differences in math SATs, ranging from 10 to 45 points. Three schools show a gap of 30 to 45 points (the U.S. Naval Academy, Michigan Technical University, and the University of Virginia). Six had 20-point gaps (North Carolina State, and Virginia's George Mason University, Old Dominion University, Virginia Commonwealth University, Virginia Tech, and James Madison University). Two (the University of North Carolina at Asheville and Norfolk State of Virginia) had gaps of 15 points, and six (the University of North Carolina campuses at Wilmington, Chapel Hill, and Greensboro, the U.S. Military Academy, Virginia's Longwood College, and the Virginia Military Institute) had a difference of 10 points.

Only at UNC Charlotte were the white and Hispanic median math SATs for admittees equal.

Performing the same binomial one-sample test as before, we find that the 25-to-1 white-to-Hispanic ratio is statistically significant ($p \leq .0001$). This means that there is less than a 1 in 10,000 chance that the 25-to-1 ratio is due to chance.

3. ACT Scores

There were twenty-three schools that provided ACT data on Hispanic and white admittees and enrollees (see Table 10). At all but one of them, the median white ACT for admittees and enrollees is greater than the median Hispanic ACT. At seven schools, the differences are substantial. There is a 4-point ACT gap at UM Ann Arbor (equal to roughly 160 combined SAT points), and a 3-point gap at CU Colorado Springs, CU Boulder, CU Denver, Michigan State, UM Dearborn, and the University of Minnesota at Morris. At the University of Minnesota at Crookston, however, the median Hispanic ACT is 2 points, or roughly 80 SAT points, *higher* than the white median ACT.

Table 10
White-Hispanic Gaps, ACT Scores

School	*White*	*Hispanic*	*White-Hispanic Gap*
University of Michigan, Ann Arbor	29	25	4
University of Colorado, Boulder	25	22	3
University of Colorado, Colorado Springs	23	20	3
University of Colorado, Denver	24	21	3
Michigan State University	24	21	3
University of Michigan, Dearborn	24	21	3
University of Minnesota, Morris	25	22	3
Adams State, Colorado	20	18	2
Mesa State, Colorado	20	18	2
Metropolitan State, Colorado	20	18	2
Northern Colorado	22	20	2
Colorado School of Mines	27	25	2
Southern Colorado	20	18	2
University of Minnesota, Twin Cities	25	23	2
University of Minnesota, Duluth	23	21	2
Central Michigan University	22	20	2
Michigan Technical University	26	24	2
Colorado State	24	23	1
Ferris State, Michigan	19	18	1
Fort Lewis College, Colorado	21	20	1
Saginaw Valley, Michigan	20	19	1
Western State, Colorado	20	19	1
University of Minnesota, Crookston	19	20	-1

The 22-to-1 ratio—the white median exceeds the Hispanic median 22 out of 23 times—is statistically significant ($p \leq .0001$). That is, there is less than a 1 in 10,000 chance that the 22-to-1 ratio is due to chance.

4. High-School Grades, Percentiles, and Class Rank

There are forty-five schools that provided data allowing us to compare white and Hispanic median GPAs, percentiles, and high-school rank for enrollees and admittees (see

Table 11). White median GPAs were greater than Hispanic GPAs at thirty-six schools, but differences in grades between whites and Hispanics are not exceptionally large. The largest gaps are at Colorado's Adams State and UM Ann Arbor, where they are slightly less than a third of a grade-point (0.30). At eight other schools, the positive difference between the white and Hispanic median is 0.10 of a grade point or less; at four schools, the median GPAs were equal; and at three schools, the Hispanic GPA slightly exceeded the white median GPA.

Table 11
White-Hispanic Gaps: Grades, Percentiles, and Class Rank

School	*Grade Type*	*White*	*Hispanic*	*White-Hispanic Gap*
Adams State, Colorado	GPA	3.10	2.80	0.30
University of Michigan, Ann Arbor	GPA	3.70	3.40	0.30
University of North Carolina, Asheville	GPA	3.54	3.25	0.29
Longwood College, Virginia	GPA	3.03	2.76	0.27
University of California, Berkeley	GPA	4.00	3.75	0.25
Michigan State University	GPA	3.43	3.22	0.21
University of Colorado, Denver	GPA	3.30	3.10	0.20
Metropolitan State, Colorado	GPA	2.90	2.70	0.20
Norfolk State, Virginia	GPA	2.40	2.20	0.20
Northern Colorado	GPA	3.10	2.90	0.20
Southern Colorado	GPA	3.00	2.80	0.20
Ferris State, Michigan	GPA	2.70	2.51	0.19
University of Washington	GPA	3.68	3.50	0.18
Saginaw Valley, Michigan	GPA	2.84	2.67	0.17
University of California, San Diego	GPA	3.92	3.76	0.16
University of North Carolina, Greensboro	GPA	3.14	2.99	0.15
University of California, Irvine	GPA	3.64	3.50	0.14
University of North Carolina, Charlotte	GPA	3.38	3.25	0.13
Washington State	GPA	3.32	3.20	0.12
Central Michigan University	GPA	3.20	3.09	0.11
Northern Michigan University	GPA	3.20	3.09	0.11
Virginia Tech	GPA	3.44	3.33	0.11
Mesa State, Colorado	GPA	2.90	2.80	0.10
University of Colorado, Boulder	GPA	3.30	3.20	0.10
Colorado School of Mines	GPA	3.80	3.70	0.10
Western State, Colorado	GPA	2.80	2.70	0.10
North Carolina State	GPA	3.65	3.57	0.08
Old Dominion University, Virginia	GPA	2.95	2.87	0.08
Michigan Technical University	GPA	3.48	3.46	0.02
George Mason University, Virginia	GPA	3.08	3.07	0.01
Colorado State	GPA	3.40	3.40	0.00
University of Colorado, Colorado Springs	GPA	3.10	3.10	0.00
Fort Lewis College, Colorado	GPA	2.90	2.90	0.00
University of Michigan, Dearborn	GPA	3.40	3.40	0.00
University of North Carolina, Chapel Hill	GPA	3.99	4.00	-0.01
Virginia Commonwealth University	GPA	3.00	3.04	-0.04
University of North Carolina, Wilmington	GPA	3.40	3.45	-0.05
University of Minnesota, Crookston	Percentile	50.00	32.50	17.50
U.S. Naval Academy	Class Rank	15th	32nd	17.00
University of Minnesota, Duluth	Percentile	74.00	66.50	7.50
James Madison University, Virginia	Percentile	85.00	80.00	5.00
University of Minnesota, Twin Cities	Percentile	82.00	77.50	4.50
U.S. Military Academy	Class Rank	14th	16.5th	2.50
University of Virginia	Percentile	97.30	96.20	1.10

University of Minnesota, Morris	Percentile	88.00	87.00	1.00

Performing the binomial one-sample test on the 30-to-7 ratio (since white medians are greater than Hispanic medians at 30 schools, versus 7 schools where Hispanic medians are greater than or equal to white medians), we find it is statistically significant ($p \leq 0.0001$).

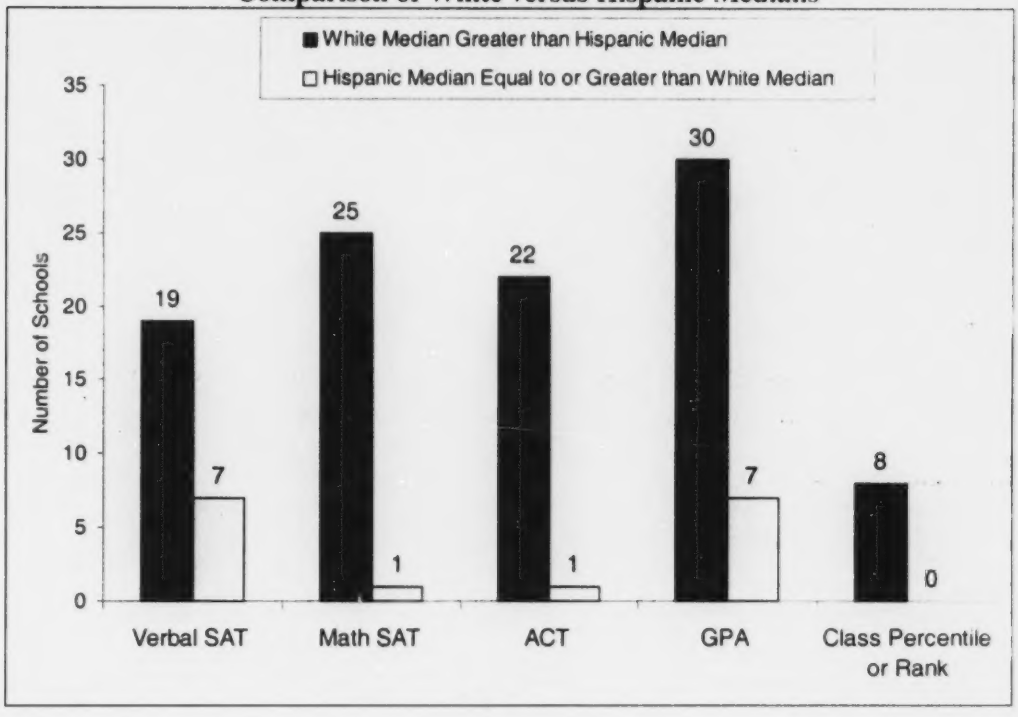
Table 11 also includes data on high-school percentiles and rank. White admittees and enrollees have a higher high-school standing compared to Hispanic admittees and enrollees at all schools with this data. But the differences at three schools—the University of Minnesota at Morris, the University of Virginia, and the U.S. Military Academy—are small (less than 3 points). At Virginia's James Madison University and the University of Minnesota at Duluth, the differences also are modest (3 to 10 percentile points). The largest gaps in high-school rank are at the University of Minnesota at Crookston and the U.S. Naval Academy (17 percentile points).

5. General Assessment: White versus Hispanic Medians

Figure 2 presents all the measures of differences in medians between white and Hispanic enrollees or admittees. Whites have a median verbal SAT greater than that of Hispanics at nineteen schools, while at seven schools Hispanics have a median greater than or equal to that of whites. For the math SAT, the ratio is 25-to-1, since the Hispanic median math score was equal to or greater than the white median at only one school. On the ACTs, white medians were greater than Hispanic medians at twenty-two schools, and the Hispanic median was equal to or greater than the white median at one. White median GPAs were also greater at thirty schools, while Hispanic medians were equal or greater at seven; white median high-school percentiles were superior at all eight schools with such data.

There are, however, many more instances in which there are small or no differences for Hispanics relative to whites than was the case for blacks. These include the twenty schools with SAT verbal differences favoring whites by 40 points or less, the sixteen schools with SAT math differences favoring whites by a margin of 40 points or less, and fifteen schools where the difference in median GPAs is 0.10 of a grade point or less. These data will be assessed further in Part IV, but it appears that the extent and amount of preference granted to Hispanics is considerably less than that afforded to blacks.

Figure 2
Comparison of White versus Hispanic Medians



C. Whites Compared with Asians

1. Verbal SAT Scores

There are twenty-seven schools that reported verbal SAT scores for whites and Asians. At twenty-four schools, the white median exceeds the Asian median verbal SAT for admittees or enrollees. The data are displayed in Table 12.

Table 12
White-Asian Gaps, Verbal SAT Scores

School	*White*	*Asian*	*White-Asian Gap*
University of California, Irvine	490	430	60
University of California, San Diego	550	490	60
University of Washington	500	440	60
University of North Carolina, Greensboro	450	395	55
University of Michigan, Dearborn	490	440	50
Virginia Military Institute	560	510	50
Virginia Commonwealth University	540	500	40
George Mason University, Virginia	540	510	30
James Madison University, Virginia	600	570	30
Michigan State University	490	460	30
Michigan Technical University	565	535	30
University of North Carolina, Asheville	580	550	30
University of North Carolina, Charlotte	460	430	30
Washington State	430	400	30
Longwood College, Virginia	520	500	20
North Carolina State	510	490	20
University of North Carolina, Wilmington	460	440	20
Virginia Tech	580	560	20
William & Mary, Virginia	680	660	20
Norfolk State, Virginia	440	430	10
Old Dominion University, Virginia	520	510	10
University of California, Berkeley	600	590	10
University of North Carolina, Chapel Hill	570	560	10
University of Virginia	690	680	10
U.S. Naval Academy	580	590	-10
University of Michigan, Ann Arbor	580	590	-10
U.S. Military Academy	550	575	-25

The white-Asian gaps are largest at UC San Diego, UC Irvine, and the University of Washington (60 points), followed by UNC Greensboro, UM Dearborn, and the Virginia Military Institute (55, 50, and 50 points, respectively). There are moderate differences in verbal SAT scores at eight additional schools: Virginia Commonwealth, Michigan State, Michigan Technical, UNC Asheville, UNC Charlotte, Virginia's George Mason and James Madison, and Washington State (40 points at Virginia Commonwealth, 30 points at the rest).

At ten schools, the gaps are small. There is a 20-point gap at NC State, UNC Wilmington, and Virginia's Longwood College, Virginia Tech, and William & Mary; and a 10-point gap at UC Berkeley, UNC Chapel Hill, and Virginia's Norfolk State, Old Dominion, and University of Virginia.

At three schools, the median verbal SAT scores of Asians were *higher* than those of whites. At the University of Michigan at Ann Arbor and the U.S. Naval Academy, Asians had median verbal scores 10 points higher than whites. At the U.S. Military Academy, Asians on average outscored whites on the verbal SAT by 25 points.

In sum, at twenty-four schools, the white median exceeds the Asian median verbal SAT, while at three schools the Asian median exceeds the white median. The 24-to-3 ratio is statistically significant ($p \leq .0001$, meaning that the probability that the 24-to-3 ratio is due to chance is less than 1 in 10,000).

2. Math SAT Scores

Of the twenty-seven schools with available data, Asians on average scored equal to or better than whites on the math SAT at twenty-five, while whites did better than Asians at only two, Virginia's Norfolk State and the University of Washington (see Table 13).

Table 13
White-Asian Gaps, Math SAT Scores

School	*White*	*Asian*	*White-Asian Gap*
Norfolk State, Virginia	430	410	20
University of Washington	590	570	20
James Madison University, Virginia	610	610	0
Michigan Technical University	640	640	0
University of California, San Diego	640	640	0
University of North Carolina, Asheville	560	560	0
University of North Carolina, Charlotte	520	520	0
University of North Carolina, Wilmington	520	520	0
Longwood College, Virginia	510	520	-10
University of California, Irvine	580	590	-10
Virginia Tech	600	610	-10
William & Mary, Virginia	660	670	-10
George Mason University, Virginia	530	550	-20
U.S. Naval Academy	670	690	-20
Old Dominion University, Virginia	520	540	-20
University of California, Berkeley	690	710	-20
University of North Carolina, Greensboro	490	510	-20
University of Virginia	690	710	-20
Virginia Military Institute	570	590	-20
Washington State University	490	510	-20
U.S. Military Academy	650	675	-25
University of Michigan, Dearborn	570	600	-30
Virginia Commonwealth University	510	540	-30
North Carolina State University	590	630	-40
University of Michigan, Ann Arbor	670	710	-40
Michigan State University	570	620	-50
University of North Carolina, Chapel Hill	630	680	-50

The Asian medians are substantially higher than the white medians at some schools. The largest gaps are at UNC Chapel Hill and Michigan State (50 points), followed by NC State and UM Ann Arbor (40 points), Virginia Commonwealth University and UM Dearborn (30 points), and the U.S. Military Academy (25 points). At eight schools (UC Berkeley, UNC Greensboro, the U.S. Naval Academy, Virginia's George Mason and Old Dominion, the University of Virginia, Virginia Military Institute, and Washington State University), there is a modest gap of 20 points. At four schools, there is a small gap of 10 points (UC Irvine, Longwood, Virginia Tech, and Virginia's William & Mary).

At six additional schools—UC San Diego, Michigan Technical, UNC Asheville, UNC Charlotte, UNC Wilmington, and Virginia's James Madison University—the median scores of Asians and whites are identical. And at Virginia's Norfolk State and the University of Washington, the white median was higher than the Asian median by 20 points.

The ratio of 2-to-25—i.e., two schools have white medians greater than Asian medians versus twenty-five schools where the Asian median is equal or greater than the white median—is statistically significant ($p \leq .0001$—that is, the 2-to-25 ratio will be due to chance in 1 out of 10,000 cases).

3. ACT Scores

There were twenty-two schools where we could compare Asian and white ACT scores for admittees or enrollees. At fourteen of them, the white median is greater than the Asian median. At eight schools, the Asian median is equal or greater. (See Table 14.)

Table 14
White-Asian Gaps, ACT Scores

School	*White*	*Asian*	*White-Asian Gap*
University of Colorado, Denver	24	20	4
University of Colorado, Boulder	25	22	3
Metropolitan State, Colorado	20	17	3
University of Minnesota, Twin Cities	25	22	3
Central Michigan University	22	20	2
Ferris State, Michigan	19	17	2
Mesa State, Colorado	20	18	2
Northern Colorado	22	20	2
Southern Colorado	20	18	2
University of Minnesota, Duluth	23	21	2
Colorado School of Mines	27	26	1
University of Colorado, Colorado Springs	23	22	1
Michigan State University	24	23	1
University of Minnesota, Morris	25	24	1
Colorado State University	24	24	0
Fort Lewis College, Colorado	21	21	0
University of Michigan, Dearborn	24	24	0
University of Michigan, Ann Arbor	29	29	0
University of Minnesota, Crookston	19	19	0
Michigan Technical University	26	27	-1
Adams State, Colorado	20	22	-2
Western State, Colorado	20	22	-2

At four schools (CU Denver, CU Boulder, Colorado's Metropolitan State, and the University of Minnesota at Twin Cities), ACT gaps are substantial. Whites on average have a median ACT score 4 points higher than Asians at CU Denver, which is the equivalent of a 160-point gap in combined SAT scores. At the other three schools, the gap is 3 points.

At six schools, there is a 2-point gap, or the equivalent of 80 points on the combined SAT. The schools are Colorado's Mesa State, Northern Colorado, Southern Colorado, Michigan's Ferris State, and Central Michigan State. At four schools, there is a modest gap between whites and Asians. It is 1 point at the Colorado School of Mines, CU Colorado Springs, Michigan State, and the University of Minnesota at Morris.

The white and Asian median ACTs are identical at Colorado State, Colorado's Fort Lewis College, UM Dearborn, UM Ann Arbor, and the University of Minnesota at Crookston. At Michigan Tech, the Asian median ACT score is greater than the white

score by 1 point and, at Colorado's Adams State and Western State, it is greater by 2 points.

At fourteen schools, then, the white median is greater than the Asian median; at eight schools, the Asian median is equal to or greater than the white median. The ratio of 14-to-8 is not statistically significant ($p \leq 0.1431$).

4. High-School Grades, Percentiles, and Class Rank

There were thirty-six schools reporting GPAs, and eight reporting high-school percentiles or class rank, for Asians and whites. The differences are, on the whole, moderate in size (see Table 15).

There are twelve schools where the white GPA is higher than the Asian GPA, and twenty-four where they are identical or the white median is lower. The largest gap where whites on average have higher GPAs than Asians is at Colorado's Adams State (0.4 point), followed by the same state's Fort Lewis College and Southern Colorado (0.20 for both), and Virginia's Norfolk State (0.18). At eight schools (UM Dearborn, Washington State, UC San Diego, UC Irvine, the University of Washington, Northern Michigan University, Central Michigan University, and Michigan Technical), whites have median GPAs higher than the Asian GPA by 0.10 or less.

At Colorado's Mesa State and School of Mines, Northern Colorado, UC Berkeley, and UM Ann Arbor, the median GPAs of whites and Asians are identical.

There are nineteen schools where the Asian median GPA is higher than the white median GPA. The differences range from a moderate 0.34 point (UNC Charlotte) to 0.10 point or less at nine schools (CU Boulder, CU Denver, Colorado's Metropolitan State, UNC Asheville, Virginia Tech, Virginia's Longwood College, UNC Greensboro, UNC Wilmington, and UNC Chapel Hill).

The data on high-school rank and percentiles yield similar findings. Asians have higher percentiles compared to whites at five of eight schools. Except for the University of Minnesota at Crookston,[22] the differences between Asian and white medians are modest at best. At the University of Minnesota at Twin Cities, for instance, there is a 1-percentile-point gap (the average white had a high-school class rank at the 82nd percentile while the average Asian was at the 81st percentile). The gap at Virginia's James Madison University was also only one percentile point, and it was even smaller at the University of Virginia (two-tenths of a percentile point). The gap was larger but still modest at the University of Minnesota at Duluth (4 percentile points). At the University of Minnesota at Morris, whites and Asians had the same class rank (88th).

Table 15
White-Asian Gaps: Grades, Percentiles, and Class Rank

School	*Grade Type*	*White*	*Asian*	*White-Asian Gap*
Adams State, Colorado	GPA	3.10	2.70	0.40
Fort Lewis College, Colorado	GPA	2.90	2.70	0.20
Southern Colorado	GPA	3.00	2.80	0.20
Norfolk State, Virginia	GPA	2.40	2.22	0.18
University of Michigan, Dearborn	GPA	3.40	3.30	0.10
Washington State	GPA	3.32	3.24	0.08
University of California, San Diego	GPA	3.92	3.86	0.06
University of California, Irvine	GPA	3.64	3.61	0.03
University of Washington	GPA	3.68	3.66	0.02
Central Michigan University	GPA	3.20	3.19	0.01
Northern Michigan University	GPA	3.20	3.19	0.01
Michigan Technical University	GPA	3.48	3.47	0.01
Mesa State, Colorado	GPA	2.90	2.90	0.00
Northern Colorado	GPA	3.10	3.10	0.00
Colorado School of Mines	GPA	3.80	3.80	0.00
University of California, Berkeley	GPA	4.00	4.00	0.00
University of Michigan, Ann Arbor	GPA	3.70	3.70	0.00
University of North Carolina, Chapel Hill	GPA	3.99	4.00	-0.01
University of North Carolina, Wilmington	GPA	3.40	3.42	-0.02
Longwood College, Virginia	GPA	3.03	3.07	-0.04
University of North Carolina, Greensboro	GPA	3.14	3.18	-0.04
University of North Carolina, Asheville	GPA	3.54	3.60	-0.06
Virginia Tech	GPA	3.44	3.50	-0.06
University of Colorado, Boulder	GPA	3.30	3.40	-0.10
University of Colorado, Denver	GPA	3.30	3.40	-0.10
Metropolitan State, Colorado	GPA	2.90	3.00	-0.10
Michigan State University	GPA	3.43	3.56	-0.13
Ferris State, Michigan	GPA	2.70	2.84	-0.14
Colorado State	GPA	3.40	3.56	-0.16
George Mason University, Virginia	GPA	3.08	3.25	-0.17
North Carolina State	GPA	3.65	3.83	-0.18
University of Colorado, Colorado Springs	GPA	3.10	3.30	-0.20
Western State, Colorado	GPA	2.80	3.00	-0.20
Virginia Commonwealth University	GPA	3.00	3.27	-0.27
Old Dominion University, Virginia	GPA	2.95	3.23	-0.28
University of North Carolina, Charlotte	GPA	3.38	3.72	-0.34
University of Minnesota, Crookston	Percentile	50.00	25.00	25.00
University of Minnesota, Twin Cities	Percentile	82.00	81.00	1.00
University of Minnesota, Morris	Percentile	88.00	88.00	0.00
University of Virginia	Percentile	97.30	97.50	-0.20
James Madison University, Virginia	Percentile	85.00	86.00	-1.00
U.S. Military Academy	Class Rank from Top	14th	11th	-3.00
University of Minnesota, Duluth	Percentile	74.00	78.00	-4.00
U.S. Naval Academy	Class Rank from Top	15th	7th	-8.00

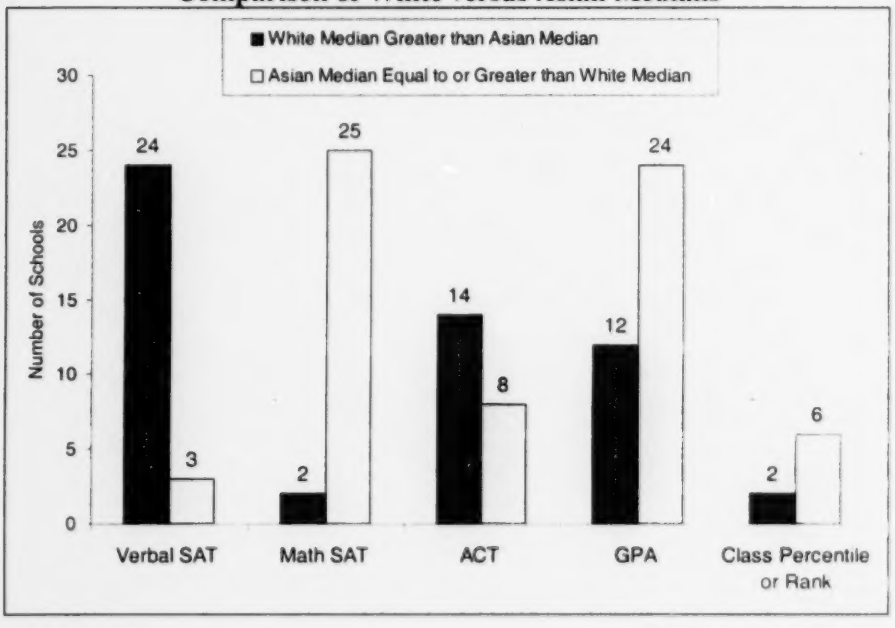
Again, there are twelve schools where the white GPA is higher than the Asian GPA, and twenty-four where it is identical or lower. The 12-to-24 ratio is not statistically significant ($p \leq .1215$). Similarly, there are two schools where the white percentile or class rank is higher, and five where the white median is equal to or lower than the Asian median. This ratio is not statistically significant either.

5. General Assessment: White versus Asian Medians

As illustrated in Figure 3, there is no evidence of systematic race preferences whereby Asians are admitted with weaker credentials compared to whites.[23] (This conclusion is also reached in Part IV.) White admittees or enrollees on average outperform Asian admittees or enrollees on the verbal SAT and the ACT. Asian admittees or enrollees on average perform generally better than white admittees or enrollees on the math SAT and with respect to high-school grades and class percentiles or ranks.

White medians are greater than Asian medians on the verbal SAT at twenty-four schools and Asian medians are greater at only three. On the math SAT, however, Asian medians are equal to or higher than white medians at twenty-five schools; white medians are higher at two. White medians are higher on the ACT at fourteen schools; Asian medians are equal or higher at eight. White median GPAs are higher than Asian median GPAs at twelve schools, while Asian median GPAs are equal or higher at twenty-four. White median class ranks or percentiles are higher at two schools, while Asian median percentiles or class ranks are equal to or higher than whites' at six schools.

Figure 3
Comparison of White versus Asian Medians



III. Racial and Ethnic Preferences and the Competitiveness of Schools

Are racial and ethnic preferences more prevalent at the more competitive schools? If we look within individual state systems, the answer seems to be yes. The more competitive schools within a system have greater preferences, although preferences occur at lower levels, too.

If we examine all schools simultaneously, preferences seem to occur across the board, but also appear to be more extensive at the more competitive schools. The "most competitive" and "highly competitive" schools on the whole exhibit greater evidence of preferences compared to the less competitive institutions.

A. Competitiveness within State Systems

In our examination of public universities and colleges within the systems of seven states,[24] we found the most competitive schools had the greatest gaps between blacks and whites and, to lesser extent, Hispanics and whites.

1. Gaps in Verbal SAT Scores within State Systems

As shown in Table 16, the more competitive schools have greater gaps between blacks and whites on the verbal SATs within the state systems. In California, UC Berkeley is both the most competitive and has the greatest gap (150 points) in verbal SAT scores. In Michigan, UM Ann Arbor is the most competitive and the gap in verbal scores is also the greatest (100 points). The same is true in North Carolina, where the gap is 90 points at UNC Chapel Hill; in Virginia, where the gap is 100 points at William & Mary and 90 points at the University of Virginia; and in Washington, where there is an 80-point gap at the University of Washington.

Results are more mixed for state systems when comparing Hispanics and whites. Berkeley and Ann Arbor are the most competitive and have the greatest verbal score gaps between Hispanics and whites within their systems. But this is not the case in North Carolina or in Virginia. At UNC Chapel Hill, the gap favors Hispanics over whites. At the University of Virginia, the white-Hispanic gap is smaller than those at other, less competitive schools.

There are even fewer cases of a large white-Asian gap in verbal scores at the most competitive schools within states. UC Berkeley has the smallest gap of the three California schools, as do UM Ann Arbor (where Asians and whites basically have the same median scores), UNC Chapel Hill, and the University of Virginia within their state systems. The University of Washington has a large verbal SAT gap (60 points), with whites outscoring Asians.

Table 16
White-Minority Gaps in Verbal SATs by State

School	State	Rating	White-Black Gap	White-Hispanic Gap	White-Asian Gap
University of California, Berkeley	CA	Most Competitive	150	120	10
University of California, San Diego	CA	Very Competitive	60	80	60
University of California, Irvine	CA	Competitive	95	80	60
University of Michigan, Ann Arbor	MI	Highly Competitive	100	60	-10
Michigan Technical University	MI	Very Competitive	95	-5	30
University of Michigan, Dearborn	MI	Very Competitive	90	N.A.	50
Michigan State University	MI	Competitive	60	-30	30
University of North Carolina, Chapel Hill	NC	Highly Competitive	90	-20	10
North Carolina State	NC	Very Competitive	80	5	20
University of North Carolina, Asheville	NC	Very Competitive	80	70	30
University of North Carolina, Charlotte	NC	Competitive	60	10	30
University of North Carolina, Wilmington	NC	Competitive	70	-30	20
University of North Carolina, Greensboro	NC	Less Competitive	50	10	55
U.S. Military Academy	US	Most Competitive	40	20	-25
U.S. Naval Academy	US	Most Competitive	70	90	-10
University of Virginia	VA	Most Competitive	90	20	10
William & Mary, Virginia	VA	Most Competitive	100	40	20
James Madison University, Virginia	VA	Very Competitive	80	0	30
George Mason University, Virginia	VA	Competitive	50	30	30
Longwood College, Virginia	VA	Competitive	40	20	20
Old Dominion University, Virginia	VA	Competitive	30	0	10
Virginia Commonwealth University	VA	Competitive	60	30	40
Virginia Military Institute	VA	Competitive	80	0	50
Virginia Tech	VA	Competitive	60	20	20
Norfolk State, Virginia	VA	Less Competitive	30	10	10
University of Washington	WA	Very Competitive	80	30	60
Washington State	WA	Competitive	70	40	30

2. Gaps in Math SAT Scores within State Systems

The white-black gap in math scores is extremely large at the more competitive schools, but in some states, such as Michigan, schools ranked "highly competitive" (UM Ann Arbor), "very competitive" (UM Dearborn), and "competitive" (Michigan State) all have white-black math SAT gaps within 10 points of each other. A similar pattern occurs in North Carolina and Virginia (see Table 17).

Table 17
White-Minority Gaps in Math SATs by State

School	State	Rating	White-Black Gap	White-Hispanic Gap	White-Asian Gap
University of California, Berkeley	CA	Most Competitive	180	90	-20
University of California, Irvine	CA	Competitive	105	130	-10
University of California, San Diego	CA	Very Competitive	100	100	0
Michigan State University	MI	Competitive	120	60	-50
Michigan Technical University	MI	Very Competitive	110	40	0
University of Michigan, Dearborn	MI	Very Competitive	140	N.A.	-30
University of Michigan, Ann Arbor	MI	Highly Competitive	130	70	-40
North Carolina State	NC	Very Competitive	110	20	-40
University of North Carolina, Asheville	NC	Very Competitive	70	15	0
University of North Carolina, Chapel Hill	NC	Highly Competitive	100	10	-50
University of North Carolina, Charlotte	NC	Competitive	100	0	0
University of North Carolina, Greensboro	NC	Less Competitive	80	10	-20
University of North Carolina, Wilmington	NC	Competitive	100	10	0
U.S. Naval Academy	US	Most Competitive	80	45	-20
U.S. Military Academy	US	Most Competitive	60	10	-25
George Mason University, Virginia	VA	Competitive	70	20	-20
James Madison University, Virginia	VA	Very Competitive	110	20	0
Longwood College, Virginia	VA	Competitive	55	10	-10
Norfolk State, Virginia	VA	Less Competitive	40	15	20
Old Dominion University, Virginia	VA	Competitive	50	20	-20
University of Virginia	VA	Most Competitive	90	30	-20
Virginia Commonwealth University	VA	Competitive	60	20	-30
Virginia Tech	VA	Competitive	80	20	-10
Virginia Military Institute	VA	Competitive	65	10	-20
William & Mary, Virginia	VA	Most Competitive	110	25	-10
University of Washington	WA	Very Competitive	140	70	20
Washington State	WA	Competitive	110	25	-20

As with verbal scores, the Hispanic-white gaps are not always greater at the most competitive schools within a state system. So while this is the case in Michigan (UM Ann Arbor), Virginia (William & Mary and the University of Virginia), and Washington (the University of Washington), it is not the case in North Carolina or California. And for the Asian-white gap in math scores, there is no pattern within states.

3. Gaps in ACT Scores within State Systems

The white-black gap in ACT scores also seems greatest at the more competitive schools within state systems. In Colorado, the largest gap is at the School of Mines; in Michigan, it is at UM Ann Arbor; and in Minnesota, at the University of Minnesota's Morris and Twin Cities campuses (see Table 18).

Table 18
White-Minority Gaps in ACTs by State

School	State	Rating	White-Black Gap	White-Hispanic Gap	White-Asian Gap
Adams State, Colorado	CO	Competitive	2	2	-1.5
Colorado State	CO	Very Competitive	3	1	0
University of Colorado, Boulder	CO	Very Competitive	4	3	3
University of Colorado, Colorado Springs	CO	Competitive	3	3	1
University of Colorado, Denver	CO	Very Competitive	4	3	4
Fort Lewis College, Colorado	CO	Less Competitive	N.A.	1	0
Mesa State, Colorado	CO	Less Competitive	2	2	2
Metropolitan State, Colorado	CO	Less Competitive	3	2	3
Northern Colorado	CO	Competitive	4	2	2
Colorado School of Mines	CO	Highly Competitive	5	2	2
Southern Colorado	CO	Competitive	2	2	2
Western State, Colorado	CO	Non-Competitive	3	1	-2
Central Michigan University	MI	Competitive	4	2	2
Ferris State, Michigan	MI	Non-Competitive	4	1	2
Michigan State University	MI	Competitive	4	3	1
Michigan Technical University	MI	Very Competitive	6	2	-1
Saginaw Valley State, Michigan	MI	Less Competitive	2	1	N.A.
University of Michigan, Dearborn	MI	Very Competitive	5	3	0
University of Michigan, Ann Arbor	MI	Highly Competitive	6	4	0
University of Minnesota, Twin Cities	MN	Very Competitive	5	2	3
University of Minnesota, Crookston	MN	Non-Competitive	1	-2	0
University of Minnesota, Morris	MN	Very Competitive	7	3	1
University of Minnesota, Duluth	MN	Competitive	4	2	2

In contrast, the white-Hispanic and white-Asian gaps in ACT scores are in general not larger at the more competitive schools within a state system. There appears to be no pattern, especially in the white-Asian case.

4. Gaps in High-School Grades, Percentiles, and Class Rank within State Systems

There appears to be no particular pattern regarding competitiveness and gaps in GPAs, percentiles, or high-school rank. This applies to the white-black, white-Hispanic, and white-Asian comparisons within state systems (see Table 19).

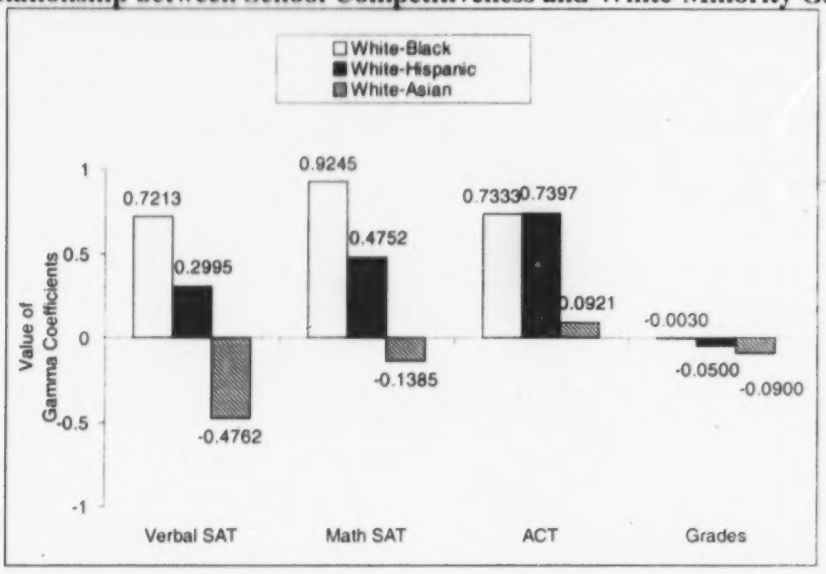
Table 19
White-Minority Gaps in Grades, Percentiles, and Class Rank by State

School	State	Rating	Grade Type	White-Black Gap	White-Hispanic Gap	White-Asian Gap
University of California, Berkeley	CA	Most Competitive	GPA	0.58	0.16	0.06
University of California, Irvine	CA	Competitive	GPA	0.25	0.25	0
University of California, San Diego	CA	Very Competitive	GPA	0.04	0.14	0.03
Mesa State, Colorado	CO	Less Competitive	GPA	0.65	0.1	0
Adams State, Colorado	CO	Competitive	GPA	0.55	0.3	0.4
Colorado School of Mines	CO	Highly Competitive	GPA	0.45	0.1	0
Colorado State	CO	Very Competitive	GPA	0.4	0	-0.16
University of Colorado, Boulder	CO	Very Competitive	GPA	0.4	0.1	-0.1
Fort Lewis College, Colorado	CO	Less Competitive	GPA	0.4	0	0.2
Southern Colorado	CO	Competitive	GPA	0.4	0.2	0.2
University of Colorado, Colorado Springs	CO	Competitive	GPA	0.3	0	-0.2
University of Colorado, Denver	CO	Very Competitive	GPA	0.2	0.2	-0.1
Metropolitan State, Colorado	CO	Less Competitive	GPA	0.2	0.2	-0.1
Northern Colorado	CO	Competitive	GPA	0.2	0.2	0
Western State, Colorado	CO	Non-Competitive	GPA	0.2	0.1	-0.2
Saginaw Valley State, Michigan	MI	Less Competitive	GPA	0.45	0.17	N.A.
Central Michigan University	MI	Competitive	GPA	0.44	0.11	0.01
Northern Michigan University	MI	Competitive	GPA	0.44	0.11	0.01
University of Michigan, Ann Arbor	MI	Highly Competitive	GPA	0.4	0.3	0
Michigan Technical University	MI	Very Competitive	GPA	0.28	0.02	0.01
Michigan State University	MI	Competitive	GPA	0.27	0.21	-0.13
Ferris State, Michigan	MI	Non-Competitive	GPA	0.25	0.19	-0.14
University of Michigan, Dearborn	MI	Very Competitive	GPA	0.2	0	0.1
University of North Carolina, Wilmington	NC	Competitive	GPA	0.45	-0.05	-0.02
University of North Carolina, Chapel Hill	NC	Highly Competitive	GPA	0.39	-0.01	-0.01
North Carolina State	NC	Very Competitive	GPA	0.38	0.08	-0.18
University of North Carolina, Charlotte	NC	Competitive	GPA	0.28	0.13	-0.34
University of North Carolina, Asheville	NC	Very Competitive	GPA	0.18	0.29	-0.06
University of North Carolina, Greensboro	NC	Less Competitive	GPA	0.04	0.15	-0.04
University of Washington	WA	Very Competitive	GPA	0.47	0.18	0.02
Washington State	WA	Competitive	GPA	0.37	0.12	0.08
Longwood College, Virginia	VA	Competitive	GPA	0.18	0.27	-0.04
George Mason University, Virginia	VA	Competitive	GPA	0.15	0.01	-0.17
Virginia Tech	VA	Competitive	GPA	0.14	0.11	-0.06
Norfolk State, Virginia	VA	Less Competitive	GPA	0.1	0.2	0.18
Virginia Commonwealth University	VA	Competitive	GPA	0.09	-0.04	-0.27
Old Dominion University, Virginia	VA	Competitive	GPA	0.05	0.08	-0.28
University of Virginia	VA	Most Competitive	Percentile	5.45	1.1	-0.2
James Madison University, Virginia	VA	Very Competitive	Percentile	5	5	-1
University of Minnesota, Crookston	MN	Non-Competitive	Percentile	21	17.5	25
University of Minnesota, Twin Cities	MN	Very Competitive	Percentile	9	4.5	1
University of Minnesota, Duluth	MN	Competitive	Percentile	2.5	7.5	-4
University of Minnesota, Morris	MN	Very Competitive	Percentile	-3	1	0
U.S. Naval Academy	US	Most Competitive	Rank	21	17	-8
U.S. Military Academy	US	Most Competitive	Rank	4	2.5	-3

B. Interstate Comparison of Schools by Their Competitiveness

Next, we analyze the schools—irrespective of their states—by their competitiveness as defined in *Barron's* (see Figure 4).

Figure 4
Relationship between School Competitiveness and White-Minority Gap



We statistically correlated the competitiveness of the school with the size of the white-black gap, the white-Hispanic gap, and the white-Asian gap.[25] We computed gamma coefficients for the verbal SAT, the math SAT, the ACT, and grades. (Gamma is an ordinal correlation coefficient that ranges from –1.00 to +1.00. A negative correlation coefficient of –1.00 signifies a perfect negative relationship between the independent variable and the dependent variable, so that an increase in the independent variable yields a decrease in the value of the dependent variable. A positive correlation coefficient of 1.00 signifies a perfect positive relationship between the two variables: As the independent variable increases, so does the dependent variable.)

We find that the more competitive schools on the whole have significantly larger differences in verbal SAT scores, math SATs, and ACTs. This does not, however, apply to grades, nor to the white-Asian gap.

1. Competitiveness and Verbal SAT Gaps[26]

There is a significant difference in the white-black verbal SAT gap among schools as rated by their competitiveness. When we correlated competitiveness with the verbal SAT gap for whites and blacks, we obtained a gamma coefficient of 0.7213, which is statistically significant ($p \leq .05$, so that the gamma is obtained by chance in 5 of every 100 cases). This means that, at the more competitive schools, the gaps between white and black median scores are larger than at the less competitive schools.

The size of white-Hispanic differences in verbal SATs was also positively associated with a school's competitiveness. The gamma of 0.2995 was statistically significant (again, at $p \leq .05$), but is much smaller than that found between competitiveness and the white-black gap. This means that more competitive schools have greater gaps in verbal SAT scores between their white and Hispanic students than do less competitive schools, but that this relationship is weaker than for white-black differences in verbal SATs.

The more competitive schools are *less* likely to have a white-Asian verbal SAT gap compared to less competitive ones. Thus, there was a significant correlation between school competitiveness and the white-Asian verbal SAT gap, but the correlation was in a negative direction (-0.4762.). This means that the *less* competitive schools have greater gaps between white and Asian verbal SAT scores than the more competitive schools.

2. Competitiveness and Math SAT Gaps

There are even larger correlations between school competitiveness and white-black and white-Hispanic test gaps with respect to the math SAT. The more competitive schools are more likely to find greater white-black math SAT gaps (gamma=0.9245) and greater white-Hispanic math SAT gaps (gamma=0.4752).

There is, however, little or no correlation between the competitiveness of a school and the white-Asian gap in math scores. The correlation is negative (gamma=−.1385) but not statistically significant. Less competitive schools are as likely to find a small to moderate gap favoring Asians as were the more competitive schools.

3. Competitiveness and ACT Gaps

We found statistically significant differences in the size of the white-black ACT gap among schools as rated by competitiveness.[27] Schools that are more competitive are also more likely to have large ACT gaps favoring whites over blacks (gamma=0.7333).

The competitiveness of the school is also positively correlated with an increasing ACT gap when comparing whites and Hispanics. The correlation coefficient is .7397 and is also statistically significant.

But there is no significant correlation between the competitiveness of a school and the white-Asian ACT gap. Most differences are either small or nonexistent, and apply to the less competitive as well as the more competitive schools.

4. Competitiveness and Grade Gaps

In contrast to the relationship between competitiveness and the size of test-score gaps, there are no statistically significant correlations between the competitiveness of a school and a difference in median high-school GPAs, percentiles, or class rank. Most gaps here between blacks and whites, whites and Hispanics, and whites and Asians are—compared to test scores—relatively small. The gaps do not increase as the schools get more competitive.[28]

There are several possible reasons for this difference between test scores and grades, including the fact that the high-school GPA data are not weighted for the quality of the high school attended nor the difficulty of the courses taken.

IV. Logistic Regression Analysis and the Relative Odds of Admission

Admitting students based on racial and ethnic preferences results in schools accepting minorities with lower test scores and grades compared to white students at the same school. Admission officers essentially reach down into the applicant pool and pull up certain students, a practice that necessarily results in at least some whites with better credentials than minority admittees being rejected from the same schools, despite their superior qualifications.

Although the data we have presented thus far provide substantial indication of racial and ethnic preferences, it is possible to make the case even stronger and considerably more precise. The most powerful means of assessing the degree of racial and ethnic preference in admissions is to develop statistical models that predict the probability of admission at a school for members of the different ethnic and racial groups, holding constant their qualifications. This is done by computing for each school multiple logistic regression equations that predict admission decisions by race and ethnicity and that include test scores and GPA or high-school class rank as statistical control variables.

We use multiple logistic regression as our statistical technique because of the nature of the data provided. One way of conventionally expressing a relationship between the independent and dependent variable is by using correlation coefficients. A negative correlation coefficient of -1.0 signifies a perfect negative relationship between the independent (predictor) variable and the dependent (or outcome) variable, whereby an increase in the value of the independent variable yields a decrease in the value of the dependent variable. A positive correlation coefficient of 1.0 signifies a perfect positive relationship between the two variables; as the independent variable increases, so does the dependent variable. Strictly speaking, however, we cannot use correlations to analyze admissions data because correlations and standard multiple regression analysis require a dependent variable that is non-binary in form. In the case of an applicant's admission status, the dependent variable (individual admission status) is binary in form—reject versus admit.[29] To get around this binary-variable problem, we rely on multiple logistic regression equations and their corresponding odds ratios.

The odds ratio is somewhat like a correlation coefficient, except instead of varying from 1.0 to -1.0, it varies between zero and infinity. An odds ratio of 1.0 to 1 means that the odds of admissions for the two groups are equal. It is equivalent to a correlation of zero. An odds ratio greater than 1.0 to 1 means that the odds of members of Group A being admitted are greater than those for members of Group B, in precisely the amount calculated. An odds ratio of less than 1.0 to 1 means the members of Group A are less likely to be admitted than those in Group B. The former is similar to a positive correlation, and the latter similar to a negative correlation.

Odds ratios are commonly found in academic studies where the relative risk of an event is reported for one group and compared to another. For example, regarding children taking aspirin, when the media reported that children taking aspirin were 42.7 times more likely to get Reyes syndrome compared to those that did not take aspirin, the media were

reporting the relative odds, or what epidemiologists call relative risk, of getting Reyes syndrome among children who take aspirin versus those that do not.

The statistical technique of multiple logistic regression allows us to present admissions data in terms of the relative odds of those in Group A being admitted compared to Group B while simultaneously controlling for a host of other possibly confounding variables. The value of the odds ratio is that it provides a relatively direct measure of the degree of racial or ethnic preference given in the admissions process for a particular school.

Such logistic regression equations predicting the likelihood of admissions were computed for 23 schools, controlling for SAT scores and grades (high-school GPAs, percentiles, or class rank).[30] In addition, for the 1999 University of Virginia data, we were able to include residency (in-state versus out-of-state status) and whether the applicant had a "legacy" consideration or not in the prediction equation.[31]

From these equations we were able to derive the odds of admission for each minority group relative to that of whites, while simultaneously controlling for the effects of other variables (i.e., grades and test scores).[32]

Logistic regression analysis also enables us to test for statistical significance. When we say that results are statistically significant, the level of significance conventionally is reported in the form of "$p \leq .05$." This value means that, with these data, there is a probability equal to or less than 5 percent that the differences found between one group and another (e.g., blacks versus whites, or Hispanics versus whites, or Asians versus whites, since we are comparing minority groups to whites) is due to chance. A difference that is statistically significant has very little chance of being the result of chance (that is, a statistical fluke).

In the next sections, we discuss odds ratios from comparing blacks to whites, Hispanics to whites, and Asians to whites. Statistically significant results are also noted. The size of the odds ratio reflects the strength of the association between racial or ethnic preference and admission status. An odds ratio equal to or greater than 3.0 is commonly thought to reflect a strong relationship. An odds ratio of about 2.0 reflects a moderate association, while a relative odds ratio of 1.5 or less indicates a weak relationship.[33] Finally, a *very* strong relationship might be taken to be the rough equivalent of the relative odds of smokers as opposed to nonsmokers dying from lung cancer, which in one well-known study is given as 14 to 1.[34] (See Appendix 1 for all odds ratios, significant and nonsignificant.)

A. Relative Odds of Admission Overwhelmingly Favor Blacks over Whites

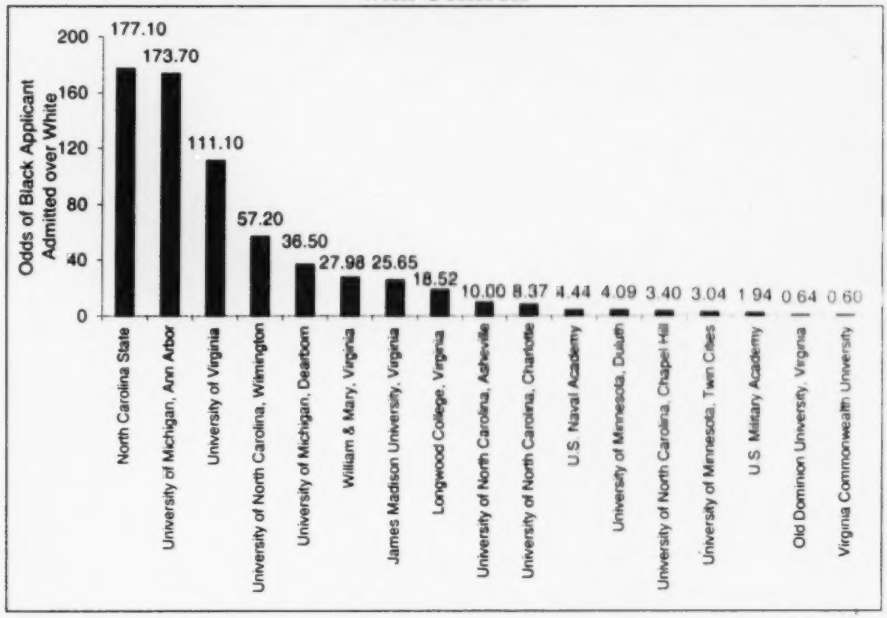
We find that fourteen schools have extremely large odds ratios favoring blacks over whites. The five largest are at NC State, with an odds ratio of 177.10 to 1, UM Ann Arbor (173.70 to 1), the University of Virginia (111.10 to 1), UNC Wilmington (57.20 to 1), and UM Dearborn (36.50 to 1).

Other schools with exceptionally large odds ratios favoring black over white applicants, controlling for test scores and grades, include Virginia's William & Mary

(27.98 to 1), James Madison University (25.65 to 1), and Longwood College (18.52 to 1), and UNC Asheville (10.00 to 1) and UNC Charlotte (8.37 to 1).

The U.S. Naval Academy (4.44 to 1), the University of Minnesota at Duluth (4.09 to 1), UNC Chapel Hill (3.40 to 1), and the University of Minnesota at Twin Cities (3.04 to 1) also favor blacks over whites, controlling for other variables (see Figure 5). There is one school (the U.S. Military Academy, with an odds ratio of 1.94 to 1) with moderate odds favoring blacks to whites, controlling for test scores and class rank.[35]

Figure 5
Statistically Significant Odds Ratios, Black versus White Applicants, with Controls



Virginia's Old Dominion and Virginia Commonwealth University have odds ratios of less than 1.0 (0.64 to 1 and 0.60 to 1, respectively). Taking the reciprocal of these odds ratios gives us the odds of a white applicant being admitted over a black applicant with the same test scores and grades. The odds ratios of white to black are 1.56 at Old Dominion and 1.67 at Virginia Commonwealth. This means that whites appear to get a racial preference over blacks, controlling for test scores and grades at these two schools. The results are statistically significant.

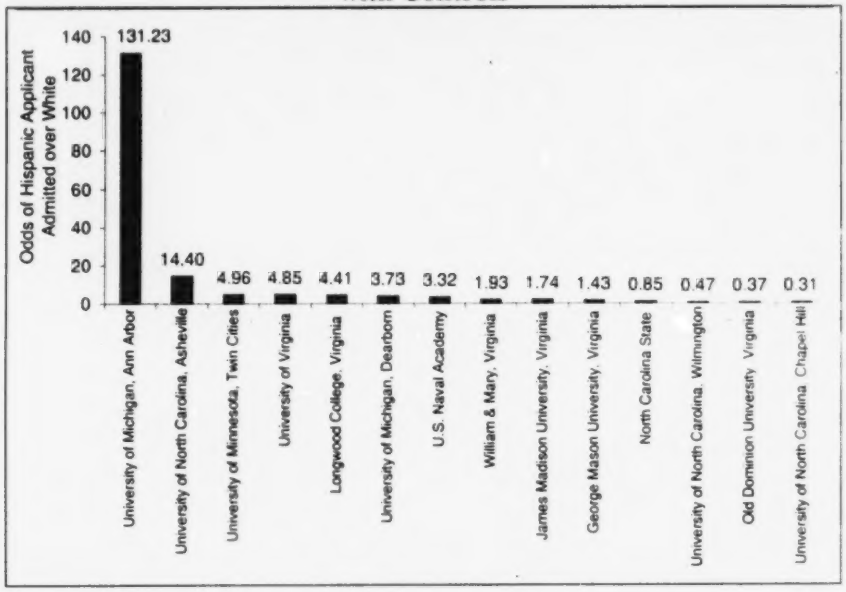
Six other schools have relatively small, statistically nonsignificant odds ratios favoring blacks over whites. At Michigan's Ferris State, the odds of a black being admitted over a white with the same test scores and grades is 1.79. The results are not statistically significant, meaning that the moderate odds ratio of 1.79 may be due to chance factors. Other schools with small and nonsignificant odds ratios for blacks relative to whites include Virginia's Norfolk State, George Mason, and Virginia Tech, the University of Minnesota at Morris, and UNC Greensboro.

In total, there are fifteen schools with positive, often extremely large, statistically significant black-to-white relative odds ratios; two schools with negative, very small, statistically significant black-to-white odds ratios; and six schools with statistically insignificant odds ratios, five of which have very small odds ratios. Of the schools with positive and statistically significant relationships, eight are *larger* than the odds ratio predicting the relationship of smoking to lung cancer, with UM Ann Arbor and NC State in a class by themselves.

B. Relative Odds of Admission Generally Favor Hispanics over Whites (But Are Less than Odds Ratios of Blacks to Whites)

We find ten schools with statistically significant Hispanic-white odds ratios favoring Hispanics, three schools with statistically significant odds ratios favoring whites, and ten with no statistically significant odds ratio (see Figure 6).

Figure 6
Statistically Significant Odds Ratios, Hispanic versus White Applicants, with Controls



The largest odds ratio favoring Hispanics is by far the University of Michigan at Ann Arbor, with an amazingly large odds ratio of 131.23 to 1. We also find large odds ratios for UNC Asheville (14.40 to 1), the University of Minnesota at Twin Cities (4.96), the University of Virginia (4.85), Virginia's Longwood College (4.41), UM Dearborn (3.73), and the U.S. Naval Academy (3.32). Three Virginia schools—William & Mary (1.93), James Madison University (1.74), and George Mason University (1.43)— have statistically significant odds ratios that modestly favor Hispanics over whites.

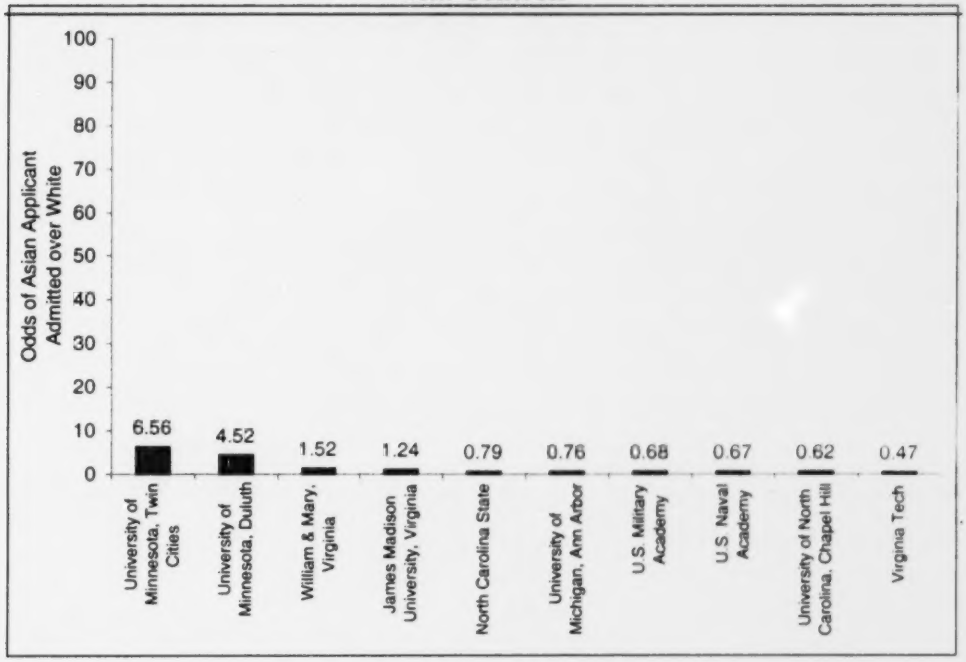
Three schools—UNC Wilmington (0.47), Virginia's Old Dominion (0.37), and UNC Chapel Hill (0.31)—have statistically significant odds ratios that modestly favor *whites* over Hispanics.

There are also ten schools where the odds ratios are not statistically significant and are relatively small.[36]

C. *Relative Odds of Admission Overall Show No Preference for Asians over Whites*

Of the twenty-three schools in our logistic regression analysis, the majority (fourteen) show no statistically significant odds of either Asians over whites or whites over Asians[37] (see Figure 7).

Figure 7
Statistically Significant Odds Ratios, Asian versus White Applicants, with Controls



Of the remaining nine schools, five show some signs of preference of whites over Asians, while four show some preference in favor of Asians relative to whites. Of those that show some signs of preference for whites over Asians, we find a relative odds ratio of 0.76 at UM Ann Arbor, 0.68 at the U.S. Military Academy, 0.67 at the U.S. Naval Academy, 0.62 at UNC Chapel Hill, and 0.47 at Virginia Tech. While these are all statistically significant, they are small in magnitude. If we take the reciprocal of these odds ratios, we have the odds of a white applicant being admitted over an Asian with the same academic qualifications. The odds ratio of white to Asian is 1.32 at the University

of Michigan at Ann Arbor, 1.47 at the U.S. Military Academy, 1.49 at the U.S. Naval Academy, 1.61 at the University of North Carolina at Chapel Hill, and 2.23 at Virginia Tech. While these are all statistically significant, the odds ratios are small in magnitude. It is entirely possible that the civilian results are due to other factors, such as state of residency, while the military odds ratios may be due to physical fitness, medical factors, or other information not available for our analysis.

Of the four schools where Asians appear to be given a preference over whites, Virginia's William & Mary and James Madison University exhibit very modest odds ratios (1.52 and 1.24 to 1, respectively). The two Minnesota schools (Twin Cities and Duluth), however, exhibit relatively large odds ratios favoring Asians over whites (6.56 and 4.52, respectively). Although these two odds ratios are smaller in magnitude than the black-white and Hispanic-white odds ratios often found elsewhere, they do provide evidence supporting the existence of an Asian preference in these two Minnesota schools of a kind not found anywhere else. It may be that Minnesota schools have defined "diversity" to include Asians and are unable, except by means of preferential treatment, to attract many to a location not known for its large Asian population.[38]

D. Summary of Results

Taking all three sets of odds ratio results together, our main finding is that preference policies vary by the racial and ethnic minority group in question.

Preferences for blacks relative to whites are large in magnitude, pervasive in extent, and national in scope. Using *Barron's* classifications,[39] we find that all of the "most competitive" schools, all the "highly competitive" schools, five of the six "very competitive" schools, four of the eight "competitive" schools, but none of the "less competitive" schools or "noncompetitive" schools exhibit substantial black-over-white racial preference as indexed by the odds ratios. This finding supports the correlation between selectivity and preference discussed earlier, that black-over-white preferences in admissions are pervasive in the first three categories and common in the fourth category of selectivity. It is only at the very least or nonselective schools—that is, those that admit more than 85 percent of all their applicants and those that admit all of their applicants—that black-over-white admissions preference cannot be detected. There are fifteen schools with large or extremely large preferences, and only eight with no preferences.

The pervasiveness of these results contradicts the conventional wisdom. Economist Thomas Kane, writing in the *Black-White Test Score Gap*, and relying on a 1982 survey of high school seniors, claims that preferences in favor of blacks and Hispanics are confined to the top fifth of all undergraduate colleges, where SATs of entering freshmen averaged 1100 or more.[40] Leaving aside Kane's idea that admission policies in the middle to late 1990s can be adequately studied by means of a survey done of high-school seniors in the early 1980s (and his view that the best place to study undergraduate preference policies is by surveying a national sample of student applicants to college who are expected to describe their successes and failures honestly, rather than an institution-by-institution study of admissions policies), his findings greatly underestimate the extent and

pervasiveness of racial and ethnic preference policies. In addition, the variability of admission policies from institution to institution casts doubt on the utility of presenting a single national summary figure as Kane does.

Hispanics also appear to be more likely to be admitted to certain schools by virtue of their ethnicity, all other things being equal, although their pattern is not as pervasive or large as that for blacks. We find that ten schools have statistically significant Hispanic-white odds ratios favoring Hispanics, three have statistically significant odds ratios favoring whites, and ten have odds ratios that are not statistically significant. Three of four "most competitive," one of two "highly competitive," four of five "very competitive," but only two of eight "competitive" schools have preferences in favor of Hispanics over whites.

With the exception of two Minnesota schools, there does not appear to be any substantial preference given to Asian applicants, and only at Virginia Tech is there an odds ratio of substantial magnitude and statistical significance indicating discrimination against Asian applicants.

A major missing variable that probably would have a substantial effect in many of these studies is the residency status of applicants. Our view is that if applicants' residency status were included, the degree of preference as measured by the odds ratio would generally increase dramatically for blacks and Hispanics, as we found for the University of Virginia. The black-white odds ratio there went from 33.0 to 111.1 when residency was included along with the other factors controlled for previously, and the Hispanic-white odds ratio went from 1.46 to 4.84. (The Asian odds ratio dropped from 2.62 to 1.21.)

V. Probabilities of Admission at Individual Schools

The meaning of our logistic regression equation results—even with their associated odds ratios—may be difficult to grasp, because the equations are complex and hard to explain without resorting to mathematical formulations. A more intuitive way of grasping the underlying dynamic of preferential admissions is to convert these logistic regression equations into estimates of the probabilities of admission for individuals with different racial/ethnic group memberships, given the same test scores and grades. (See Appendix 2 for the complete multiple logistic regression equations used below.)

In this section, we examine eight of the top schools in Michigan, North Carolina, Minnesota, and Virginia. We compare the probabilities of admission for individuals belonging to different racial and ethnic groups, using the logistic regression equation specific to each school.

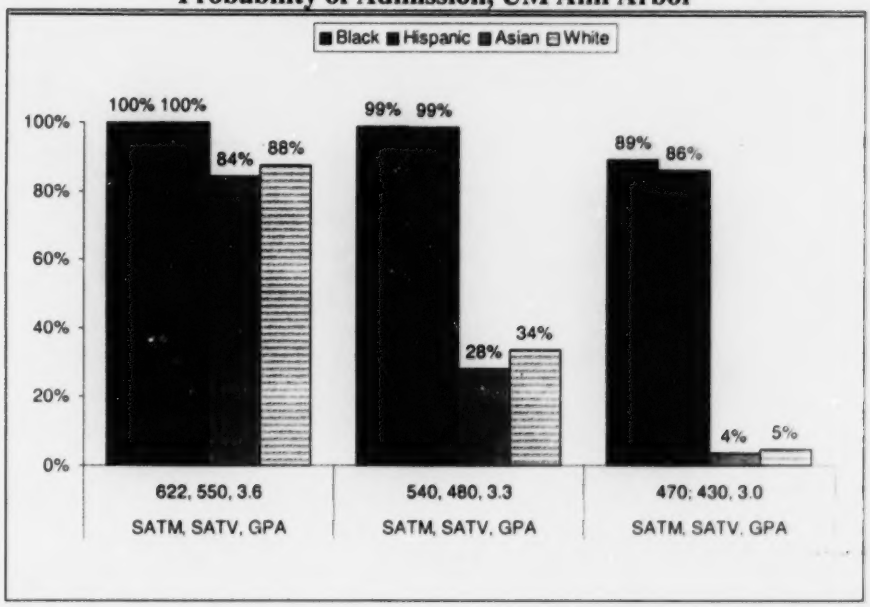
The calculation of probabilities for each racial or ethnic group basically estimates the chances of admission for members of each group, all with the same test scores and grades. To calculate actual probabilities, we first had to enter real test scores and grades into the equation. The test scores and grades entered are the same for blacks, whites, Hispanics, and Asians. We decided to enter the test scores and grades as reported for black admittees at the 75th, 50th, and 25th percentiles for each school, although we could have picked any set of scores and grades.[41]

From there, we calculated the chances a black applicant, a white applicant, a Hispanic applicant, and an Asian applicant would have if he or she applied with those qualifications. These calculations do not change the statistical results reported in the earlier section; they merely provide illustrations of their meaning.

A. Michigan

The University of Michigan at Ann Arbor awards an extraordinary degree of preference to black and Hispanic applicants. The relative odds of a black applicant being admitted over a white applicant were 174 to 1; for a Hispanic applicant, they were 131 to 1. As the figure below shows, this translates into large differences in the probability of admission for individuals belonging to different racial/ethnic groups, assuming the individuals have the same test scores and grades. A black applicant with a 540 SAT math score, a 480 verbal score, and a 3.3 GPA has a 99 percent chance of admission, as does a Hispanic applicant with the same test scores and grades. Asian and white applicants with the same qualifications, however, have only a 28 percent chance and 34 percent chance of admission, respectively (see Figure 8).

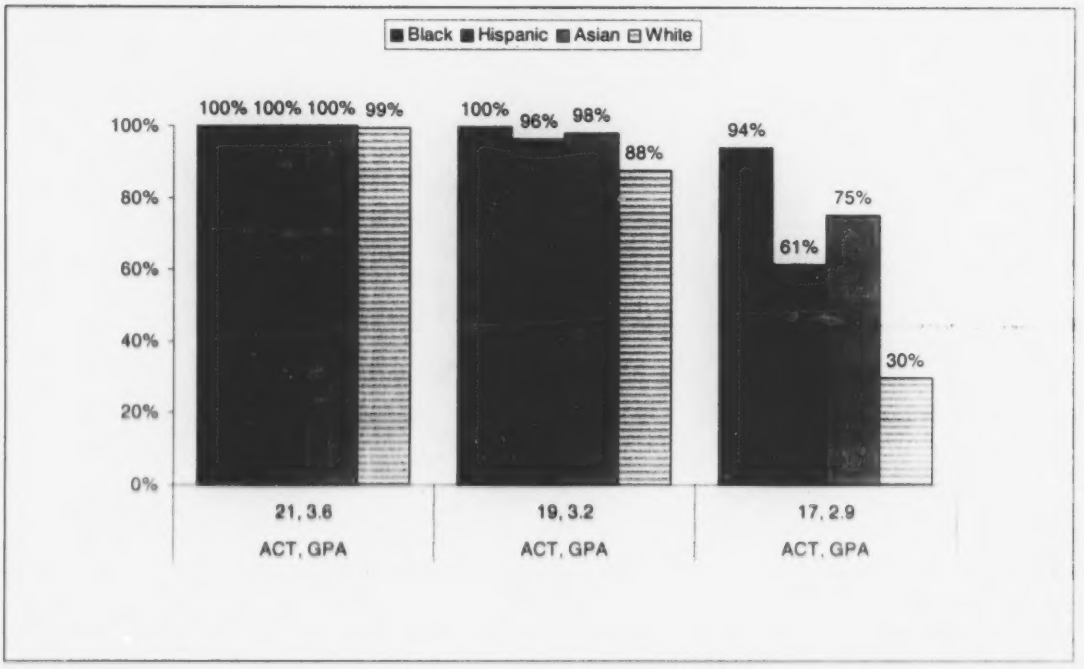
Figure 8
Probability of Admission, UM Ann Arbor



The University of Michigan at Dearborn also favors black applicants over other groups. Controlling for test scores and grades, the relative odds of admissions favor a black applicant over a white applicant by 36.5 to 1. This translates into the estimated differences in admission rates, given particular ACT scores and GPAs, set out in Figure 9.

Race preferences at UM Dearborn seem to play a larger role as applicant qualifications get worse. With an ACT score of 21 and a GPA of 3.6, 100 percent of black, Hispanic, and Asian applicants, and 99 percent of white applicants, would likely be admitted—there are no substantial differences in admission rates. With an ACT score of 19 and a GPA of 3.2, 100 percent of black applicants would probably be admitted, as well as 96 percent of Hispanic and 98 percent of Asian applicants—but white applicants are likely to be admitted at the lower rate of 88 percent with these same qualifications. And it gets worse at the next level. With a relatively low ACT score of 17 and a GPA of 2.9, 94 percent of black applicants would be admitted compared to 61 percent of Hispanics and 75 percent of Asians—but only 30 percent of whites with these same test scores and grades are admitted.

Figure 9
Probability of Admission, UM Dearborn

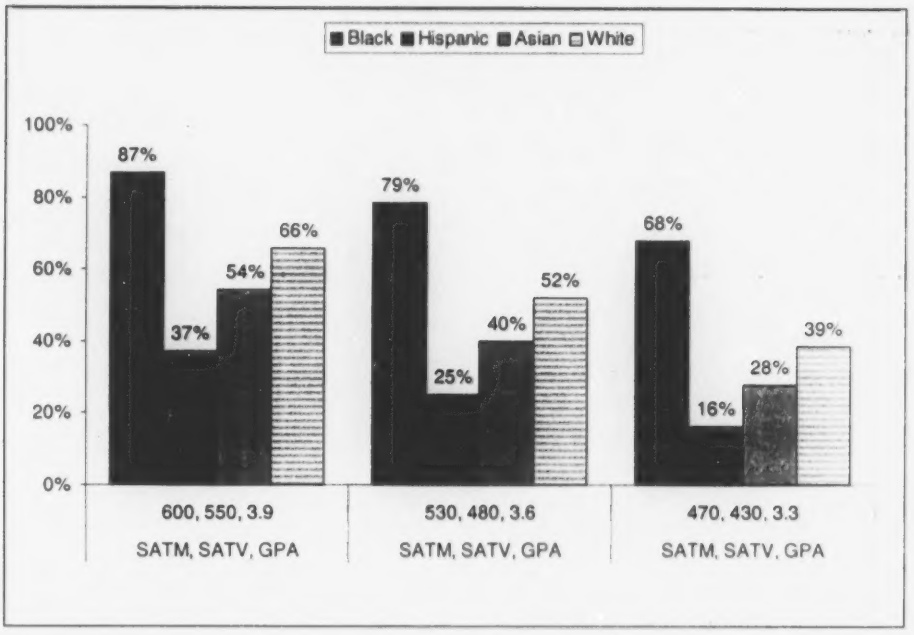


B. North Carolina

We examine two schools in the North Carolina system. One, UNC Chapel Hill, shows some preference for blacks over whites; the other, NC State, has as substantial a degree of preference for blacks as does UM Ann Arbor.

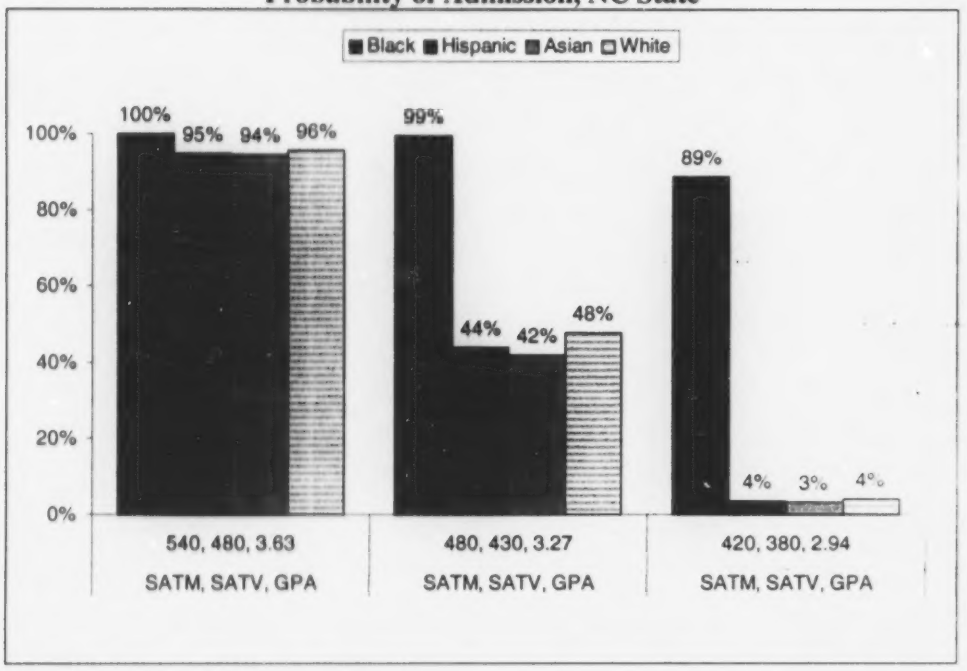
The situation at UNC Chapel Hill is not a straightforward case of blacks and Hispanics being favored over whites and Asians. The odds ratio favoring blacks over whites is 3.40 to 1, controlling for test scores and grades. Chapel Hill's odds ratios for other groups are the reverse, *favoring whites* over Hispanics (0.31) and Asians (0.62).[42] Translated into probabilities for admission given the same test scores and grades, we find 87 percent of blacks, 66 percent of whites, 54 percent of Asians, but only 37 percent of Hispanics admitted with an SAT math score of 600, an SAT verbal score of 550, and a GPA of 3.9. If the applicant had an SAT math score of 530, an SAT verbal score of 480, and a GPA of 3.6, and if he or she were black, there would be a 79 percent chance of admission, compared to 25 percent for whites, 40 percent for Asians, and 25 percent for Hispanics with the same qualifications. With an SAT math score of 470, an SAT verbal score of 430, and a 3.3 GPA, a black applicant would have a 68 percent chance of admission, compared to a 39 percent chance for a white, 28 percent for an Asian, and 16 percent for a Hispanic with identical credentials (see Figure 10).

Figure 10
Probability of Admission, UNC Chapel Hill



NC State, like UM Ann Arbor, favors blacks over other groups in the admissions process to an extreme degree. The odds ratio of blacks over whites at NC State is 177 to 1, while the odds ratios of whites to Asians and whites to Hispanics are less than 1.00 and are not statistically significant. The odds ratios do not mean that highly qualified white, Asian, and Hispanic applicants are rejected. On the contrary, while a black applicant with a 540 SAT math score, a 480 SAT verbal score, and a 3.63 GPA would have a 100 percent chance of admission, whites, Asians, and Hispanics with the same scores would have almost as good a chance (96 percent, 94 percent, and 95 percent, respectively). But the gaps in admission probabilities emerge as credentials get worse. With an SAT math score of 480, an SAT verbal score of 430, and a GPA of 3.27, 99 percent of black applicants—but only 44 percent of Hispanics, 42 percent of Asians, and 48 percent of whites with the same credentials—would be admitted. With an SAT math score of 420, a verbal score of 380, and a 2.94 GPA, black applicants would have an 89 percent chance of admission, compared to 4 percent for Hispanics, 3 percent for Asians, and 4 percent for whites (see Figure 11).

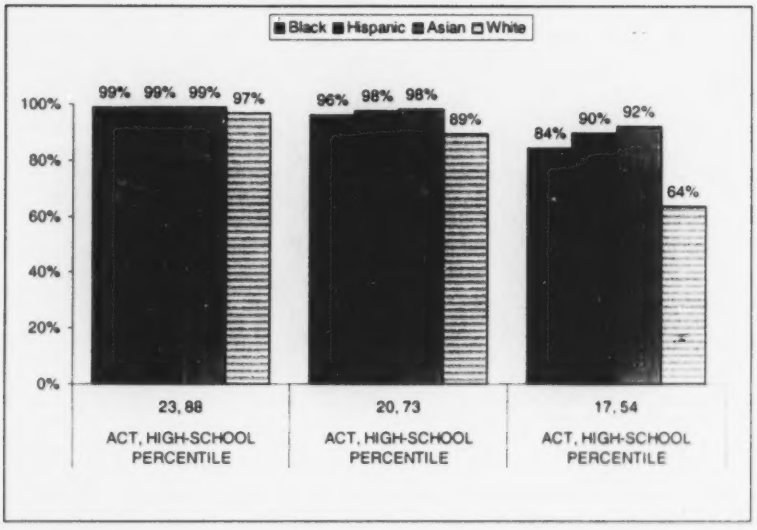
Figure 11
Probability of Admission, NC State



C. Minnesota

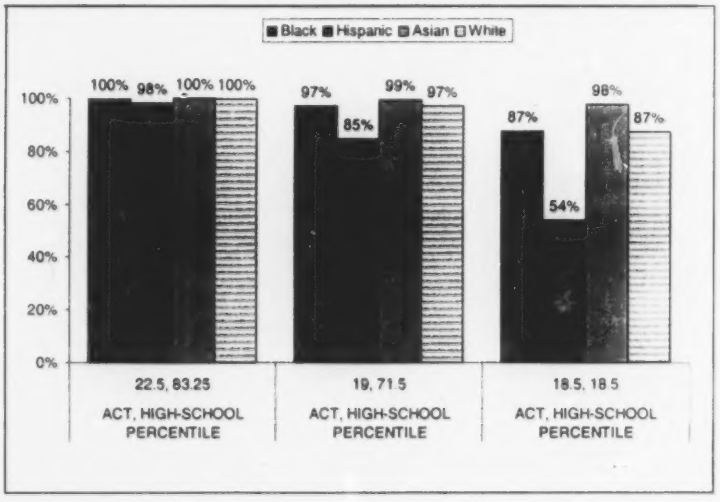
Two Minnesota schools pose significant contrasts. The flagship school, the University of Minnesota at Twin Cities, has some preference for blacks (with an odds ratio of 3.04 to 1), but actually more for Asians (6.56 to 1) and Hispanics (4.96 to 1), over whites. This is the only school we have studied where the Asian and Hispanic odds ratios are both statistically significant and larger than those for blacks over whites. The University of Minnesota at Twin Cities has such high admission rates, however, that the differentials are not as large as those for other schools, such as UM Ann Arbor. With an ACT of 23, and at the 88th percentile in high-school class rank, 99 percent of blacks, Hispanics, and Asians, and 97 percent of whites, would be admitted. With an ACT of 20 and a 73rd class percentile, almost 100 percent of blacks, Hispanics, and Asians would be admitted; so would 89 percent of whites with the same qualifications. But with lesser qualifications—an ACT score of 17 and a 54th class percentile—the differences between groups emerge. While 92 percent of Asians and 90 percent of Hispanics would be admitted, only 84 percent of blacks would be, and whites would be admitted at only a 64 percent rate with identical credentials (see Figure 12).

Figure 12
Probability of Admission, University of Minnesota at Twin Cities



The University of Minnesota's campus at Morris—a school ranked, like the campus at Twin Cities, as "very competitive" by *Barron's*—seems to exhibit no preferences of any one group over another (see Figure 13). No odds ratio for the campus at Morris was significant, although the different admission rates for those students with lower class rank and test scores point to a possible preference favoring other groups over Hispanics (there are too few Hispanic applicants to be sure).[43]

Figure 13
Probability of Admission, University of Minnesota at Morris



D. Virginia

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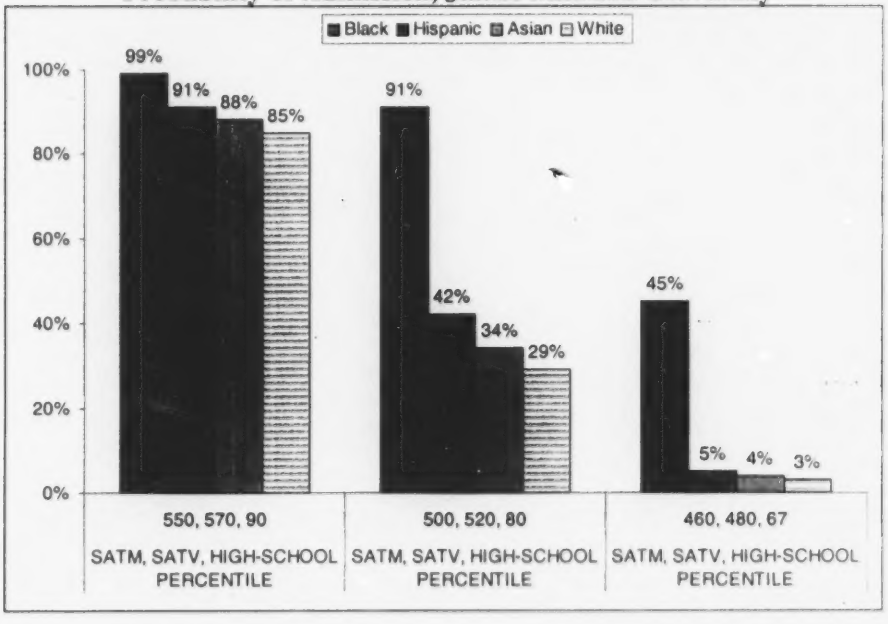
We report on two universities in Virginia, James Madison University and the University of Virginia.[44] We obtained the same kind of data for James Madison University as we did for the other schools where we calculated odds ratios, but received significantly more information from the University of Virginia, including residency and alumni status.

The odds ratios at JMU highly favor blacks over whites (25.65 to 1), but only slightly favor Hispanics (1.74 to 1) and Asians (1.24 to 1) over whites. This is reflected in the admission rates of applicants from different groups with the same scores and class percentiles. With an SAT math score of 550, a verbal score of 570, and a 90th class percentile, 99 percent of black applicants, 91 percent of Hispanics, and 88 percent of Asians would be admitted. Whites would be admitted with the same qualifications at a lower rate. With a math score of 550, a verbal score of 520, and an 80th class percentile, 91 percent of blacks would be admitted, but a much smaller proportion of Hispanics (42 percent), Asians (34 percent), and whites (29 percent) with the same credentials would be admitted. At a much lower level—a math score of 460, a verbal score of 480, and a 67th class percentile—45 percent of blacks would be admitted, but only 5 percent of Hispanics, 4 percent of Asians, and 3 percent of whites with the same qualifications would be admitted (see Figure 14).

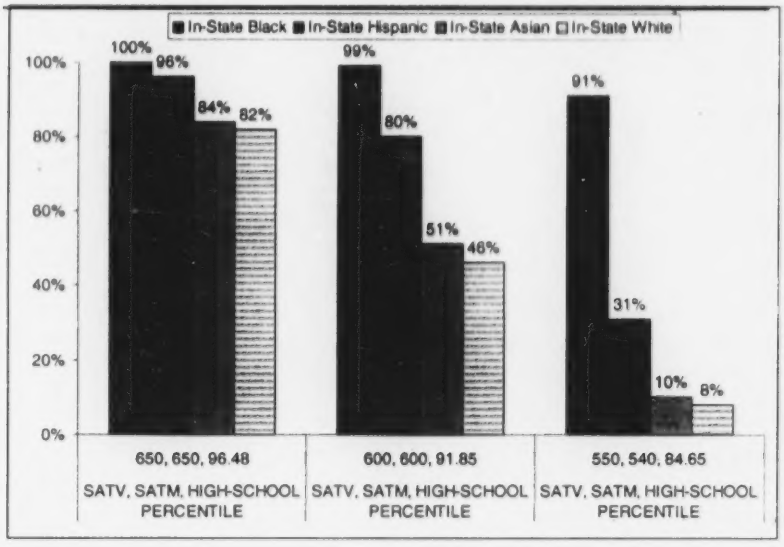
Figure 14
Probability of Admission, James Madison University

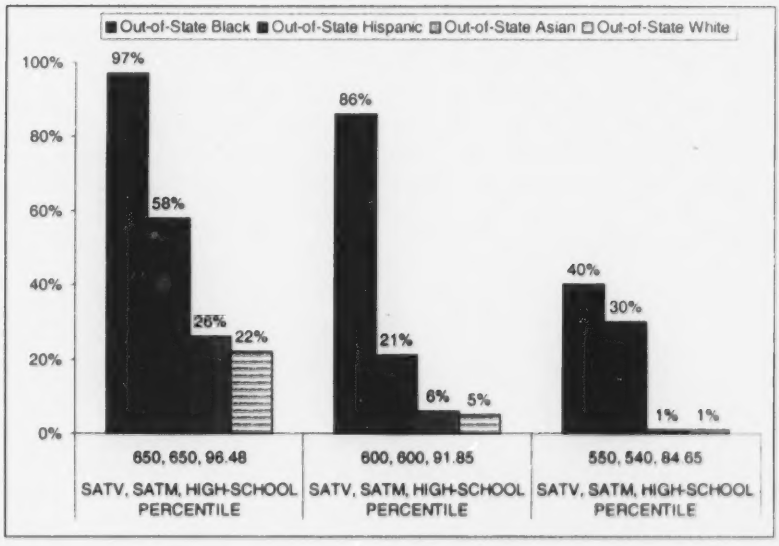


UVA has one of the largest odds ratios favoring blacks over whites in our study. The likelihood of a black being admitted over a white applicant—controlling for alumni

status, residency, test scores, and high-school rank—is 111.1 to 1. The odds ratio barely favors the Hispanic applicant over whites (1.65 to 1), and the Asian-white odds ratio, at roughly 1-to-1, is not statistically significant. In the following analysis, we will divide the applicants into in-state and out-of-state residents and estimate their probabilities of admission given the same test scores and class ranks (see Figure 15).

Figure 15
Probability of Admission, University of Virginia





Estimating probabilities of admission for applicants with the same credentials but from different groups shows how race is the most powerful determinant of admissions to the University of Virginia. With a verbal score of 650, a math score of 650, and a 96th class percentile, a black in-state applicant would have a certain (100 percent) probability of being accepted, compared to 96 percent for Hispanics and only 82 percent for Asian and white in-state applicants. These admission probabilities—that is, for in-state Hispanics, Asians, and whites—are lower than those for a black *out-of-state* applicant with the same qualifications, who has a 97 percent chance of getting in.

At lower levels, the disparities are even greater. With a verbal score of 600, a math score of 600, and with a 92nd class percentile, a black in-state applicant would have a 99 percent chance of admission and a black out-of-state applicant with the same credentials would have an 86 percent chance of admission. The admission rates for other groups are significantly lower. In-state Hispanics would have an 80 percent chance, in-state Asians would have a 51 percent chance, and in-state whites would have only a 46 percent chance of being admitted. Out-of-state Hispanics, Asians, and whites fare even worse. Finally, in-state blacks with a verbal score of 550, a math score of 540, and an 85th class percentile would still have a 91 percent chance of getting into the University of Virginia. An out-of-state black applicant with these credentials would have much less chance (40 percent), but this is still much higher than that for an in-state Hispanic (31 percent), an in-state Asian (10 percent), or an in-state white applicant (8 percent). Racial preferences favoring blacks over other groups are so strong that it greatly outweighs considerations of state residency and alumni status. Clearly, while race may be "just one" of several factors, it is also *the* overwhelming factor.

Conclusions

At the beginning of this monograph, we listed various "defenses" that are often used to justify preferential admissions policies. Our data have cast considerable light on them and also provide the framework for systematic future testing of them.

The claim that racial and ethnic preferences exist only at a few leading colleges and universities has been shown to be false. The preferences are pervasive and operate across the nation. They operate in colleges and universities in every region of the country for which we have data. There is no reason to think that they operate less strongly in the colleges and universities of states such as New York and New Jersey, for which we were refused access to the relevant data.

Among the schools we have studied, at least three-fourths have a substantial degree of preference in favor of blacks over whites and about two-fifths have a similar degree of preference in favor of Hispanics over whites, as measured by the logistic regression results as well as the wealth of other data that we have assembled here. There are few preferences in favor of Asians over whites. Only at noncompetitive schools and less competitive schools is nondiscrimination as likely as not to exist.

It is true that race and ethnicity are "just one factor" in determining admissions status—but it is a very large factor. This is best seen from the predictors based on the logistic regression analysis. Race/ethnicity dwarfs both alumni status and residency status in predicting the probability of admissions at the University of Virginia. We are reasonably certain that if we had obtained residency and legacy data from all the colleges and universities studied, the evidence of discrimination would be even stronger than we found it to be.[45]

Two other claims—namely that all those who are admitted are qualified and that admissions directors know best about admissions policies because they have data to which the public does not have access—are best dealt with together. If by "qualified" one means as determined by admission committees, then this is true by definition and not helpful in understanding racial and ethnic preference policies. In reality, qualifications for admissions are most usefully determined in relation to subsequent performance in the school. Those who are truly qualified for admission are individuals who perform well in the college or university, while those who are not qualified are those individuals who perform poorly or even flunk out.

By their very nature racial preference policies lead to individuals from the "right" racial and ethnic groups with weaker academic qualifications being selected for admission over individuals from the "wrong" racial and ethnic groups with stronger academic qualifications. In effect, then, as colleges and universities deliberately employ preferential policies to increase the number of black and Hispanic enrollees, they are widening the black-white test score gap among students at their own institutions.

What are the consequences of these policies? A reasonable starting hypothesis is that preferentially selected individuals will perform worse than others. There is much evidence available to support this conclusion. To cite only a single example, Klitgaard summarizes 60 validity studies carried out by the Educational Testing Service which

show that college grades are reasonably well predicted by a combination of SAT scores and high-school grades for members of all racial and ethnic groups.[46] Since preferential admission widens the racial and ethnic test score and grade gap among enrollees, it very likely increases the gaps in subsequent academic performance between the racial and ethnic groups as well.

It is possible to expand upon this line of reasoning. In enhancing the black-white gap at institutions that have preferential admissions policies, colleges and universities are also deliberately guaranteeing that a substantial portion of students admitted on a preferential basis will receive lower grades, take easier majors, require longer to finish, have a higher probability of dropping out, and be less likely to graduate with honors.

This can have negative consequences for the colleges and universities themselves. They may seek to deal with poor performance on the part of preferential admittees by means of grade inflation, pass-fail grading options, extensive remediation programs, and other "corrective measures" designed to ease the difficulties of these marginal students. Educational credentials are correspondingly inflated and the college diploma and final grade-point average are correspondingly devalued as measures of academic achievement and individual competence.

Now that the existence of pervasive preferences in undergraduate admissions is established, future research should be devoted to tracing out the consequences of these preferential policies for the institutions that have adopted them and for the individuals who are either helped or harmed by them. Such research requires that colleges and universities grant public access to qualified researchers of heretofore restricted data on the subsequent academic performance of preferential admittees versus nonpreferential admittees and allow the researchers to publish their findings without fear or favor.

As with information on college admission policies, however, colleges and universities have been loath to provide outsiders this kind of access. Yet blanket assurances on the part of education officials that all is well are not believable because time and again official assurances that preferences do not exist are routinely contradicted by the actual data when they have been made available, often by litigation, to the general public.

There is no substitute for the sustained empirical research necessary to obtain a full understanding of preferential admissions policies and their consequences. Such research will require the abandonment of the policy of concealment to which colleges and universities have become accustomed. This policy ill befits institutions ostensibly devoted to the growth and diffusion of public knowledge—a policy which, in any event, cannot last indefinitely in a free society.

Appendices

Appendix 1. Odds Ratios

School	*Black-to-White*	*Hispanic-to-White*	*Asian-to-White*
North Carolina State	177.10*	0.85	0.79
University of Michigan, Ann Arbor	173.70*	131.23*	0.76*
University of Virginia	111.10*	4.84*	1.21
University of North Carolina, Wilmington	57.2*	0.47*	0.88
University of Michigan, Dearborn	36.50*	3.73*	7.10
William & Mary, Virginia	27.98*	1.93*	1.52*
James Madison University, Virginia	25.65*	1.74*	1.24*
Longwood College, Virginia	18.52*	4.41*	0.58
University of North Carolina, Asheville	10.00*	14.4*	0.97
University of North Carolina, Charlotte	8.37*	0.72	0.61
U.S. Naval Academy	4.44*	3.32*	0.67*
University of Minnesota, Duluth	4.09*	2.40	4.52*
University of North Carolina, Chapel Hill	3.40*	0.31*	0.62*
University of Minnesota, Twin Cities	3.04*	4.96*	6.56*
U.S. Military Academy	1.94*	1.20	0.68*
Old Dominion University, Virginia	0.64*	0.37*	1.14
Virginia Commonwealth University	0.60*	0.73	1.36
Ferris State, Michigan	1.79	1.33	34.14
Norfolk State, Virginia	1.20	0.67	0.68
University of Minnesota, Morris	1.01	0.17	5.79
George Mason University, Virginia	0.99	1.43*	1.01
University of North Carolina, Greensboro	0.97	1.21	0.43
Virginia Tech	0.89	0.8	0.47*

*Statistically significant, $p \leq 0.05$.

Appendix 2. Complete Logistic Regression Equations Estimating the Probability of Admission to Eight Schools

The University of Michigan, Ann Arbor

a=EXP(-24.0974+ 0.0078*SATM+ 0.0092*SATV + 4.4811*HS-GPA+5.1576*Black-0.2634*Asian + 4.3770*Hisp)

P(admit) = a/(1+a)

The University of Michigan, Dearborn

a=EXP(-26.5310+ 0.6217ACT + 0.5209*HS-GPA*10+3.5981*Black+1.9608*Asian + 1.3165*Hisp)

P(admit) = a/(1+a)

The University of North Carolina, Chapel Hill

a=EXP(-6.2923+ 0.0001*SATM+ 0.0013*SATV + 1.5821*HS-GPA+1.2229*Black-0.4838*Asian -1.178*Hisp)

P(admit) = a/(1+a)

North Carolina State

a=EXP(-27.3976+ 0.0141*SATM+ 0.0169*SATV + 4.0582*HS-GPA+5.1767*Black-0.2305*Asian -0.1600*Hisp)

P(admit) = a/(1+a)

The University of Minnesota, Twin Cities

a=EXP(-4.5008+ .0779*ACT+.0693*HSPCT + 1.1106*Black+1.8815*Asian + 1.6008*Hisp)

P(admit) = a/(1+a)

The University of Minnesota, Morris

a=EXP(-10.0605+ .3624*ACT+.0932*HSPCT + .0097*Black+1.7562*Asian - 1.7743*Hisp)

P(admit) = a/(1+a)

James Madison University, Virginia

a=EXP (-25.7475 + 0.0194*SATM + 0.0150*SATV + .0922Perc + 3.2446*Black+ 0.2157*Asian + 0.5525*Hisp),

P(admit) = a/(1+a)

The University of Virginia

Sex: 1= female; State: 1=in-state; Alumni: 1=legacy applicant
a=EXP(-29.0393+ 0.0078*SATV+ 0.0103*SATM + 0.166*HS-Rank + 1.463*Alumni+ 2.7574*State -0.0241*Sex+ 4.7105*Black+ 0.1957*Asian + 1.5783*Hisp)

P(admit) = a/(1+a)

Endnotes

[1] See William Beer, "Resolute Ignorance: Social Science and Affirmative Action," *Society* (May/June 1987): 63-69.

[2] See Robert Klitgaard, *Choosing Elites* (New York: Basic Books, 1985); Richard J. Herrnstein and Charles Murray, *The Bell Curve* (New York: The Free Press, 1994): 447-77; Thomas J. Kane, "Racial and Ethnic Preference in College Admissions," in Christopher Jencks and Meredith Phillips, eds., *The Black-White Test Score Gap* (Washington, D.C.: The Brookings Institution, 1998): 431-56; and William G. Bowen and Derek Bok, *The Shape of the River* (Princeton, NJ.: Princeton University Press, 1998).

[3] Timothy J. McGuire, "My Bout with Affirmative Action," *Commentary* (April 1992): 50-52.

[4] A term of art they use many times. There are 12 mentions of this term in the index alone (Bowen and Bok, 469).

[5] See an extensive review of the book in Robert Lerner, "The Empire Strikes Back," *CEO Policy Brief* (November 1998): 3-23. The Bowen and Bok study itself is designed to conceal as much as it reveals. See also Stephan Thernstrom and Abigail Thernstrom, "Reflections on *The Shape of the River*," *UCLA Law Review*, 46, #5 (June 1999): 1583-1631. When we asked for permission to examine Bowen and Bok's database, which they used for their study, we were turned down (Letter from Richard E. Quandt of the Andrew W. Foundation to Robert Lerner, December 14, 1999).

[6] A limited amount of such information is provided in Klitgaard, *Choosing Elites*.

[7] See our article, "Reverse Discrimination by the Numbers," *Academic Questions* 13 (Summer 2000): 71-84.

[8] See, e.g., Kane, "Racial and Ethnic Preference in College Admissions," and William G. Bowen and Derek Bok, *The Shape of the River*.

[9] For example, this was Georgetown law school's response to McGuire's revelations. See *ABA Journal* (July 1991): 30.

[10] It should be pointed out that data from the California and Washington State schools refer to the period before Proposition 209 in California and Initiative 200 in Washington State became law in each state, respectively.

[11] We use "schools" as a shorthand for "colleges and universities."

[12] Additional information from schools in Maryland, Arizona, and Iowa was not analyzed in time for inclusion in this report.

[13] The University of Washington agreed to give us complete data as part of the settlement in a freedom-of-information-act lawsuit.

[14] We used the binomial one-sample test in our analysis of Colorado schools, however. The technique is discussed in Sidney Siegel and N. John Castellan, Jr., *Nonparametric Statistics for the Behavioral Sciences*, 2nd edition (New York: McGraw Hill, 1988).

[15] UC Berkeley, UC San Diego, UC Irvine, Central Michigan State, Northern Michigan State, and Michigan's Saginaw Valley State provided only enrollee data, so comparable admission rates could not be calculated.

[16] A gap is "large" when it is 60 or more SAT points on the verbal or math test, a "moderate" gap is a 30- to 60-point difference, and a gap of less than 30 points is "small." For ACTs, a 1-point ACT difference is roughly equal to 40 points on the combined SAT (or a 20-point gap on the verbal and math tests). As for GPAs, we consider less than ½ point to be a "small" gap, ½ point to 1 point a "moderate" gap, and a gap greater than 1 point to be "large."

[17] A "race-neutral" policy is one that does not offer racial or ethnic preferences. It is one under which all students are subject to the same criteria.

[18] The use of multiple logistic regression equations renders irrelevant any problem due to the black-white test score gap. This is because multiple logistic regressions allow for a direct assessment of the effects of race on the probability (or relative odds) of admission. This is discussed in considerable detail in Parts IV and V below. See the review by Robert Lerner of *The Shape of the River* for more extended discussion (note 5).

[19] See Table 2 for a list of schools that provided enrollee data and those that provided admittee data.

[20] The U.S. Military Academy is the exception.

[21] For further discussion, see *Preferences in Virginia Higher Education* (January 1999), published by the Center for Equal Opportunity and available on CEO's website, <www.ceousa.org>.

[22] Whites had a high-school rank of 50th at the University of Minnesota at Crookston, while Asians ranked on average 25th in their high-school classes. But Crookston is rated "non-competitive" by *Barron's*.

[23] As we noted earlier, this does not apply to specific cases such as the University of Minnesota at Twin Cities, where there is some evidence of Asian preferences in admission.

[24] We exclude from the discussion of state systems the U.S. Military Academy and the U.S. Naval Academy (West Point and Annapolis), although data on the military academies are included in the tables.

[25] Schools were coded along a 1-to-6 scale, where 1 was "noncompetitive," 2 "less competitive," 3 "competitive," 4 "very competitive," 5 "highly competitive," and 6 "most competitive."

[26] The SAT gaps were coded as follows: 60 or more SAT points was coded as a 3 if the white score was greater than the minority score, and a −3 if the minority score was greater; an SAT verbal or math gap of 30–60 points was coded as a 2 if the white score was greater, and a −2 if the minority score was greater; an SAT score of less than 30 points was coded a 1 or −1, depending on which group had the higher score; and identical scores were assigned a 0.

[27] The gaps in ACT scores were coded as follows: a 1-point gap on the ACT was considered a small gap, and assigned a 1 if the white score was greater than the minority score and a −1 if the reverse was the case; a 2-point gap was assigned a 2 or a −2 depending on which group had the higher ACT score; and an ACT gap of 3 or more points was assigned a 3 or −3, to represent a large or extremely large difference.

[28] The gamma for competitiveness and white-black grade gap is −.003; for the white-Hispanic gap, it is −0.05; and for the Asian-white gap, it is −0.09. None is statistically significant.

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[29] Correlations assume homoscedasticity, or equal variance among groups; a binary dependent variable such as admission status (reject versus admit) is inherently heteroscedastistic— that is, the variance among groups is unequal.

[30] The schools are Virginia's William & Mary, University of Virginia, George Mason University, Longwood College, Old Dominion University, Virginia Commonwealth University, Virginia Tech, Norfolk State University, and James Madison University; the U.S. Naval Academy and U.S. Military Academy; UM Ann Arbor, UM Dearborn, and Michigan's Ferris State University; the University of Minnesota campuses at Twin Cities, Morris, and Duluth; and UNC Asheville, NC State, UNC Chapel Hill, UNC Charlotte, UNC Wilmington, and UNC Greensboro.

[31] "Legacy" refers to whether an applicant is the son or daughter of an alumnus/a.

[32] For a more complete discussion of odds ratios, see David E. Lilienfeld and Paul D. Stolley, *Foundations of Epidemiology*, 3rd edition (New York: Oxford University Press, 1994): 226-28, 316-17. Regarding logistic regression, see Alan Agresti, *Introduction to Categorical Data Analysis* (New York: John Wiley and Sons, 1996).

[33] See Lilienfeld and Stolley, *Foundations of Epidemiology*, 200-02.

[34] Taken from a 20-year longitudinal study of British male physicians by R. Doll and R. Peto, as quoted in Agresti, *Introduction to Categorical Data Analysis*, 47.

[35] It is possible that the moderate and small odds ratios are a function of the residency status of the applicant, but this is not likely with regard to the extraordinary odds ratios at institutions such as UM Ann Arbor.

[36] The lack of statistical significance may be due to using too small a sample size for the test. If the results are statistically significant, the size of the sample is not relevant. Technically, results of statistical nonsignificance mean that the researcher cannot reject the null hypothesis and not that he or she accepts the null hypothesis. Alternatively, establishing statistical significance at, say, the 0.05 level of significance means that 95 percent of the time the differences are likely to be due to chance fluctuations.

[37] Recall that an odds ratio and its reciprocal have the same meaning. They differ only in the direction of the relationship. For example, a black-to-white odds ratio of 2.0 is the same as a white-to-black odds ratio of 0.5.

[38] According to the Census Bureau, at the time of our study, "Asians and Pacific Islanders" made up 2.2 percent of Minnesota's population, versus 3.5 percent for the United States overall.

[39] *Barron's* categories and their associated SAT ranges are: "most competitive," with a combined SAT range of 1250-1600; "highly competitive," with a combined SAT range of 1150-1250; "very competitive," with a combined SAT range of 1050-1150; "competitive," with a combined SAT range of 900-1050; "less competitive," with a combined SAT range below 900; and "non-competitive," which are essentially open admission institutions.

[40] See Kane, "Racial and Ethnic Preference in College Admissions," 431-56.

[41] We could have used the test scores and grades at the 25th, 50th, and 75th percentiles for white, Hispanic, or Asian admittees, or we could have arbitrarily picked a set of test scores and grades.

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[42]These odds ratios, because they are relatively small, may be a function of in-state residency, a variable we did not have for analysis. Controlling for residency may eliminate any evidence of racial or ethnic preferences at UNC Chapel Hill, although this is just speculation, since that also might strengthen this evidence (as, indeed, it does in Virginia).

[43]The other possibility is that the Hispanics are also nonresidents, and so would also not be favored. In any event, there are few cases, and that sometimes leads to findings of statistical nonsignificance.

[44]We excluded William & Mary from comparative analysis because the institution provided test scores but not grades for data analysis.

[45]The University of Michigan admission point system awarded 20 points to "underrepresented" minorities but only 10 points to in-state resident applicants.

[46]Klitgaard, 252. Indeed, these criteria *overpredict* the performance of black and Hispanic admittees—that is, black and Hispanic students with grades and test scores equal to white students perform worse in college than do their white counterparts. See, e.g., Klitgaard, 164.

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